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Development of Basic Data and Knowledge Regarding Organic Removal Capabilities of Commercially Available Home Water Treatment Units Utilizing Activated Carbon: Phase 1 Supplemental Data

Gulf South Research Inst.
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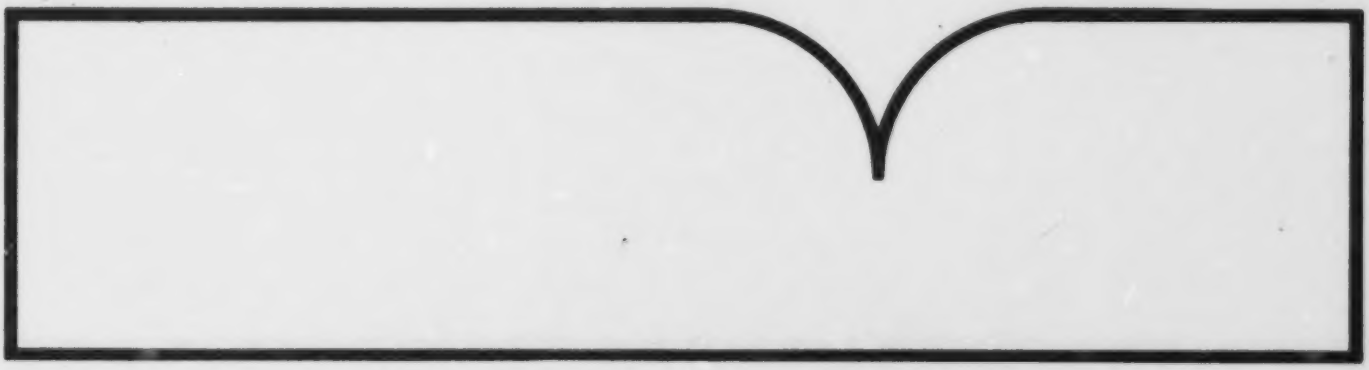

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DEVELOPMENT OF BASIC DATA AND KNOWLEDGE REGARDING ORGANIC REMOVAL CAPABILITIES OF COMMERCIALLY AVAILABLE HOME WATER TREATMENT UNITS UTILIZING ACTIVATED CARBON

Phase 1 Supplemental Data

Submitted to:

Mr. F.A. Bell, Jr.
U.S. Environmental Protection Agency
Office of Water Supply (WH550)
Washington, D.C. 20460

Presented by:

James K. Smith
Stephen C. Lynch
Judith E. Gebhart, Ph.D.
Carolyn S. Monteith
Gulf South Research Institute

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J.K. Smith, S.C. Lynch, J. Gebhart and C.S. Monteith

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This supplemental data report contains detailed test results. Frank Bell, Project Officer

16. ABSTRACT

An extensive study of commercially available home water treatment units has been conducted over a 3-year period to examine organics reduction and microbiological factors.

Phase 1 addressed trial protocol development and pilot testing using spiked and unspiked New Orleans tap water (6 units on each test). Before and after filter tests were run for trihalomethanes (THMs), non-purgeable total organic carbon (NPTOC), standard plate count (SPC) bacteria, endotoxin, silver levels (when appropriate), chlorine residuals and peripheral tests. Based on the pilot tests, unspiked tap water was selected as the main means of testing.

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PREFACE

The supplementary data section has been compiled to reduce the bulk of the Phase 1 report and includes data tables and figures not essential to the reading of the report. In this supplement, the original data are reported along with several groups of tables and figures which describe series of test runs for each of the units. A brief description of the groups of tables and figures is provided to aid the reader in data review. The supplemental data are arranged in three categories (1) analytical quality assurance, (2) organic chemical data, and (3) biological data.

ANALYTICAL QUALITY ASSURANCE

Substantial time and effort have been applied to assure the validity of the analytical results. Data listed in Tables S2 through S14 indicate the accuracy, precision, and recoveries obtained for various analytical methodologies used thus far in the study. Quality assurance data presented in the tables are generated by a statistical manipulation of analytical data from duplicates, spikes, and standard samples (details are included in the Phase 1 report).

Table S1 lists the operating conditions used on the gas chromatograph for trihalomethane (THM) analysis. Precision, accuracy, and recovery quality assurance data for the THM analysis are presented in Tables S2 through S4. Tables S5 through S7 list quality assurance data for the nonpurgeable total organic carbon (NPTOC) analysis. Quality assurance data for the nonpurgeable total organic halide (NPTOHa) analysis are detailed in Tables S8 through S10. Additional quality assurance data are given in Tables S11 through S14 for the silver and standard plate count procedures.

ORGANIC CHEMICAL DATA

The organic chemical data are divided into three categories corresponding to the major types of organic analysis used in Phase 1: (1) trihalomethane, (2) nonpurgeable total organic carbon, and (3) nonpurgeable total organic halide. Table S16 and Figure S4 present total THM and NPTOC levels in the influent test water during the study period. Tables S17 through S28 list effluent THM concentrations at various intervals during the rated lifetime of the study carbon filters. These effluent data are plotted in Figures S5 through S18. Figures S5 through S16 indicate the effluent TTHM concentration as a function of water processed, while Figures S17 and S18 plot individual THM values to show removal for individual chemicals (the major constituents of the trihalomethane group). Included in each of Figures S5 through S18 and Tables S17 through S28 is an average influent TTHM value which was calculated for the period during which each series of test runs was performed. This is an estimation of the overall stress level subjected to the filters and is indicated by a broken line in the figures. Figure S19 is a plot of percent TTHM reduction with respect to the volume of water processed and was calculated in the normal manner using effluent and average influent TTHM values.

NPTOC concentrations are also presented in Tables S16 through S28. Influent NPTOC levels are plotted in Figure S4. Three plots, Figures S20 through S22, are presented to show typical effluent and average influent NPTOC values for a series of tests on three study units. Figure S23 represents a percent NPTOC reduction curve and was derived in a manner similar to that used for TTHM percent reduction curves (Figure S19).

Nonpurgeable total organic halide data are presented in Table S29. The NPTOHa data base is much smaller than for either the THM or NPTOC analysis, and only six effluent sampling events were targeted for each test model for each stress condition.

BIOLOGICAL DATA

The supplemental data in this area are divided into three groups: (1) standard plate count (SPC) data, (2) endotoxin, and (3) coliform data. SPC

data for the influent test water are shown in Table S30. Effluent SPC data are listed in Tables S31 through S42. Effluent and corresponding influent data have been plotted on point-to-point plots in Figures S24 through S53. Influent data are indicated by the broken curve.

SPC and endotoxin data on washings of unused and used carbon samples are presented in Table S43. The 5 g samples were powdered and washed with 100 ml of sterile, pyrogen-free water and the rinsings analyzed. The results have been expressed in SPC/g and ng/g for the sake of comparison.

Endotoxin concentrations for influent and effluent water samples are presented in Tables S30 through S42 and Figures S3 and S54 through S83. Table S30 and Figure S3 show endotoxin levels in the influent water during the study period, while Tables S31 through S41 and Figures S54 through S83 detail effluent concentrations.

Essentially all coliform assay results were negative and are listed in Tables S44 and S45. The one positive result has been attributed to extraneous contamination.

Several groups of data which were accumulated during Phase 1 testing may be of interest in the explanation of data trends. These data include the iodine numbers listed in Table S15, room and water temperatures (Table S1), and room temperature exposure patterns (Table S2). The room temperature exposure patterns represent temperature patterns suspected to exist within the carbon beds as a result of water cycling and differences in room and water temperatures.

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TABLE S1. CHROMATOGRAPHIC CONDITIONS FOR THM ANALYSIS

Parameter	General	Confirmatory
Column	6 ft x 2 mm ID 10% Squalene A.W. Chromosorb W 80/100 mesh	6 ft x 2 mm ID 3% SP100 Supelcoport 100/120 mesh
Injection Temperature	150°C	150°C
Oven Temperature	67°C	50°C
Detector Temperature	300°C	300°C
Flow Rate	20 ml/min	60 ml/min
Injection Volume	3 µl	3 µl

TABLE S2. PRECISION QUALITY CONTROL DATA FOR THM ANALYSIS

Set Number	Chloroform				Bromodichloromethane				Dibromochloromethane				Bromoform			
	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i
1	179	180	179	1	15.7	17.0	16.4	1.3	4.8	4.4	4.6	0.4	<0.5	<0.5	*	*
2	208	209	209	1	25.4	25.4	25.4	0.0	7.4	6.9	7.4	0.9	0.7	1.2	1.0	0.5
3	173	182	178	9	21.6	22.4	22.0	0.8	5.7	6.4	6.1	0.7	<0.5	<0.5	*	*
4	151	152	152	1	20.3	20.4	20.4	0.1	7.1	7.0	7.1	0.1	0.6	0.6	0.6	0.0
5	148	145	147	3	28.2	28.6	28.4	0.4	11.4	11.7	11.6	0.3	1.2	1.3	1.3	0.1
6	167	169	168	2	32.3	32.1	32.2	0.2	11.6	11.4	11.5	0.2	1.4	1.4	1.4	0.0
7	157	152	155	4	26.6	26.2	26.4	0.4	9.9	10.0	10.0	0.1	0.9	0.9	0.9	0.0
8	157	154	156	3	26.2	27.1	26.7	0.9	9.9	10.3	10.1	0.4	0.9	1.0	1.0	0.1
9	150	150	150	0	26.0	26.1	26.1	0.1	9.8	9.9	9.9	0.1	0.9	0.9	0.9	0.0
10	147	154	151	7	25.6	26.6	26.1	1.0	9.7	10.0	9.9	0.3	0.9	0.9	0.9	0.0
11	150	153	152	3	26.2	25.9	26.1	0.3	10.0	9.8	9.9	0.2	0.9	0.9	0.9	0.0
12	160	162	161	2	26.0	26.7	26.4	0.7	9.2	9.9	9.6	0.7	0.7	0.8	0.8	0.1
13	161	162	162	1	26.3	26.7	26.5	0.4	9.5	9.4	9.5	0.1	0.8	0.8	0.8	0.0
14	157	159	158	2	26.9	27.4	27.2	0.5	10.2	10.2	10.2	0.0	1.0	0.9	1.0	0.1
15	158	158	158	0	25.5	26.0	25.8	0.5	9.3	9.6	9.5	0.3	0.8	0.7	0.8	0.1
16	166	164	165	2	22.9	22.5	22.7	0.4	7.7	7.6	7.7	0.1	0.5	0.5	0.5	0.0
17	168	160	164	8	24.8	23.2	24.0	1.6	7.7	7.0	7.4	0.7	<0.5	<0.5	*	*
18	179	178	179	1	23.4	23.3	23.4	0.1	6.2	6.0	6.1	0.2	<0.5	<0.5	*	*
19	197	204	201	7	22.8	23.6	23.2	0.8	6.0	6.2	6.1	0.2	<0.5	<0.5	*	*
20	228	231	230	3	31.2	31.0	31.6	0.8	7.4	7.4	7.4	0.0	<0.5	<0.5	*	*
21	175	169	172	6	33.7	32.6	33.2	1.1	11.1	10.8	11.0	0.3	0.8	0.8	0.8	0.0
22	37.4	39.2	38.3	1.8	2.6	2.7	2.7	0.1	1.2	1.2	0.0	0.0	<0.5	<0.5	*	*
23	173	166	170	7	36.2	34.6	35.4	1.6	13.1	12.5	12.8	0.6	0.5	<0.5	*	*
24	146	154	150	8	28.7	29.8	29.3	1.1	11.6	11.8	11.7	0.2	1.2	1.1	1.2	0.1
25	180	180	180	0	32.2	32.0	32.1	0.2	11.6	11.7	11.7	0.1	1.4	1.4	1.4	0.0
26	161	163	162	2	23.7	23.6	23.7	0.1	6.5	6.3	6.4	0.2	<0.5	<0.5	*	*
27	247	239	243	8	41.1	39.6	40.4	1.5	9.2	9.3	9.3	0.1	<0.5	<0.5	*	*
28	124	128	126	4	25.6	26.2	25.9	0.6	7.3	7.2	7.3	0.1	<0.5	<0.5	*	*

(continued)

TABLE S2. (continued)

Set Number	Chloroform				Bromodichloromethane				Dibromochloromethane				Bromoform			
	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i
29	218	206	212	12	26.0	25.0	25.5	1.0	8.3	8.1	8.2	0.2	<0.5	<0.5	*	*
30	68	67	68	1	9.1	9.2	9.2	0.1	6.2	6.2	6.2	0.0	5.2	5.2	5.2	0.0
31	197	208	203	11	29.0	31.0	30.0	2.0	17.0	18.0	17.5	1.0	16.0	17.0	16.5	1.0
32	210	208	209	2	35.0	35.0	35.0	0.0	19.0	19.0	19.0	0.0	18.0	18.0	18.0	0.0
33	124	125	125	1	15.0	15.0	15.0	0.0	5.7	5.7	5.7	0.0	<0.5	<0.5	*	*
34	160	166	163	6	19.0	19.0	19.0	0.0	6.7	6.6	6.6	0.1	<0.5	<0.5	*	*
35	143	138	141	5	13.0	13.0	13.0	0.0	4.8	4.6	4.7	0.2	<0.5	<0.5	*	*
36	137	137	137	0	13.0	13.0	13.0	0.0	4.5	4.5	4.5	0.0	<0.5	<0.5	*	*
37	116	115	116	1	19.1	18.9	19.0	0.2	6.9	6.9	6.9	0.0	<0.5	<0.5	*	*
38	214	215	215	1	22.9	22.2	22.6	0.7	5.9	5.7	5.8	0.2	5.8	5.5	5.7	0.3
39	132	127	130	5	12.8	12.5	12.7	0.3	4.7	4.6	4.7	0.1	<0.5	<0.5	*	*
40	213	211	212	2	9.0	8.9	9.0	0.1	3.0	3.0	3.0	0.0	<0.5	<0.5	*	*
41	196	190	193	6	8.0	7.8	7.9	0.2	2.6	2.5	2.6	0.1	<0.5	<0.5	*	*
42	158	164	161	6	7.1	7.4	7.3	0.3	2.2	2.3	2.3	0.1	<0.5	<0.5	*	*
43	213	210	212	3	4.1	4.1	4.1	0.0	1.0	1.0	1.0	0.0	<0.5	<0.5	*	*
44	147	156	152	9	5.3	5.6	5.5	0.3	1.6	1.7	1.7	0.1	<0.5	<0.5	*	*
45	160	162	161	2	3.7	3.8	3.7	0.1	1.2	1.2	1.2	0.0	<0.5	<0.5	*	*
46	98	101	100	3	3.0	3.2	3.1	0.2	0.9	0.9	0.9	0.0	<0.5	<0.5	*	*
47	97	89	93	8	3.3	3.0	3.2	0.3	1.0	1.0	1.0	0.0	<0.5	<0.5	*	*
48	94	88	91	6	3.8	3.6	3.7	0.2	1.0	1.0	1.0	0.0	<0.5	<0.5	*	*
49	188	188	188	0	4.5	4.8	4.7	0.3	<0.5	<0.5	*	*	<0.5	<0.5	*	*
50	188	183	186	5	4.3	4.3	4.3	4.3	<0.5	<0.5	*	*	<0.5	<0.5	*	*

(continued)

TABLE S2. (continued)

Set Number	Chloroform				Bromodichloromethane				Dibromochloromethane				Bromoform			
	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i	Sample A	Sample B	X_i	R_i
51	255	278	267	23	7.0	7.8	7.4	0.8	<0.5	<0.5	*	*	<0.5	<0.5	*	*
52	188	195	192	7	5.0	5.3	5.2	0.3	<0.5	<0.5	*	*	<0.5	<0.5	*	*
53	455	450	453	5	11.5	11.5	11.5	0.0	4.8	3.0	3.9	1.8	<0.5	<0.5	*	*
54	200	190	195	10	10.0	9.3	9.7	0.7	2.3	3.8	3.1	1.5	<0.5	<0.5	*	*
55	348	333	341	15	9.5	9.0	9.3	0.5	3.0	1.8	2.4	1.2	<0.5	<0.5	*	*
56	420	418	419	2	8.3	8.3	8.3	0.0	1.4	1.5	1.5	0.1	<0.5	<0.5	*	*
			$\sum X_i$ = 9951				$\sum X_i$ = 1052				$\sum X_i$ = 417.2				$\sum X_i$ = 61.6	
			$\sum R_i$ = 255				$\sum R_i$ = 30.5				$\sum R_i$ = 14.3				$\sum R_i$ = 2.4	
			R_c = 0.0838C				R_c = 0.0948C				R_c = 0.1121C				R_c = 0.1274C	

TABLE S3. ACCURACY QUALITY CONTROL DATA FOR THM ANALYSES*

Set Number	Chloroform			Bromodichloromethane			Dibromochloromethane			Bromoform		
	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery
1	173	190	91	23.2	24.2	96	4.3	4.9	88	6.5	7.2	90
2	179	190	94	23.8	24.2	98	4.4	4.9	90	6.5	7.2	90
3	184	190	97	25.0	24.2	103	4.8	4.9	98	7.0	7.2	97
4	176	190	93	23.6	24.2	98	4.4	4.9	90	6.5	7.2	90
5	178	190	94	24.0	24.2	99	4.5	4.9	92	6.8	7.2	94
6	192	190	101	25.3	24.2	104	4.6	4.9	94	7.1	7.2	94
7	182	190	96	24.3	24.2	100	4.5	4.9	92	6.6	7.2	92
8	178	190	94	23.9	24.2	99	4.4	4.9	90	6.7	7.2	92
9	183	190	96	24.3	24.2	100	4.6	4.9	94	6.5	7.2	93
10	187	190	98	24.5	24.2	101	4.5	4.9	92	6.3	7.2	90
11	177	190	93	23.7	24.2	98	4.3	4.9	88	6.4	7.2	89
12	192	190	101	23.2	24.2	96	4.3	4.9	88	6.4	7.2	89
13	173	190	91	23.1	24.2	95	4.2	4.9	86	6.4	7.2	89
14	184	190	97	24.0	24.2	99	4.4	4.9	90	6.6	7.2	92
15	197	180	109	26	24	109	6.7	5.9	113	6.1	5.4	113
16	181	180	100	25	24	104	6.0	5.9	100	6.4	5.4	119
17	181	180	101	26	24	106	6.6	5.9	112	6.0	5.4	111
18	169	180	94	24	24	100	7.2	5.9	122	6.6	5.4	122
19	186	180	103	26	24	109	6.8	5.9	115	6.1	5.4	113
20	219	234	94	25	24	104	9.9	9.2	107	10.2	9.4	109
21	218	234	93	25	24	104	9.6	9.2	104	9.8	9.4	104
22	223	234	95	25	24	104	9.4	9.2	102	9.7	9.4	103
23	235	234	100	26	24	109	10.0	9.2	109	10.5	9.4	112
24	232	234	99	26	24	109	10.0	9.2	109	10.5	9.4	112
25	224	234	96	28	24	120	8.7	9.2	95	9.0	9.4	96
26	188	187	109	20	25	80	8.1	7.3	111	8.6	7.5	115
27	192	187	103	21	25	84	8.1	7.3	111	8.4	7.5	112
28	178	187	95	20	25	80	7.6	7.3	104	7.9	7.5	105

*Accuracy quality control data are generated from spiked tap water samples collected over a period of several days.

(continued)

TABLE S3. (continued)

Set Number	Chloroform			Bromodichloromethane			Dibromochloromethane			Bromoform		
	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery
29	233	220	106	24	22	110	6.3	5.0	126	5.7	5.1	112
30	222	220	101	23	22	103	6.0	5.0	120	5.6	5.1	110
31	214	220	97	23	22	103	6.0	5.0	120	5.3	5.1	104
32	212	220	96	22	22	100	5.6	5.0	112	4.9	5.1	96
33	190	220	86	20	22	91	4.9	5.0	98	4.2	5.1	82
34	193	220	87	21	22	94	5.2	5.0	104	4.5	5.1	88
35	214	220	97	22	22	100	5.2	5.0	104	4.8	5.1	94
36	224	220	102	23	22	105	5.6	5.0	112	5.1	5.1	100
37	215	220	98	23	22	105	5.6	5.0	112	4.9	5.1	96
38	220	220	100	23	23	104	6.0	5.0	120	5.6	5.1	110
39	193	220	88	19	22	86	5.0	5.0	100	4.9	5.1	96
40	221	220	100	21	22	95	6.1	5.0	122	5.4	5.1	106
41	228	220	104	23	22	105	5.3	5.0	106	5.3	5.1	104
42	210	220	95	21	22	95	5.0	5.0	100	5.0	5.1	98
43	214	220	97	22	22	100	5.1	5.0	102	5.0	5.1	98
44	203	220	92	20.3	22.1	92	5.7	5.0	114	5.2	5.1	102
45	222	220	101	22.1	22.1	100	6.1	5.0	122	5.7	5.1	112
46	210	220	95	20.6	22.1	93	5.8	5.0	116	5.3	5.1	104
47	207	220	94	19.7	22.1	89	5.3	5.0	106	6.0	5.1	118
48	210	220	95	20.2	22.1	91	5.3	5.0	106	6.2	5.1	118
49	235	220	107	23.9	22.1	108	6.0	5.0	120	6.2	5.1	120
50	232	220	105	23.6	22.1	107	6.0	5.0	120	6.1	5.1	120
51	214	220	97	22.9	22.1	104	5.9	5.0	118	5.8	5.1	114
52	215	220	97	22.2	22.1	100	5.7	5.0	114	5.5	5.1	108
53	238	220	108	22.6	22.1	102	5.7	5.0	114	5.4	5.1	106
54	212	220	96	24.2	22.1	110	6.2	5.0	124	6.3	5.1	124
55	217	220	99	24.9	22.1	113	6.5	5.0	130	6.4	5.1	124
	211	220	96	23.8	22.1	108	6.3	5.0	126	6.3	5.1	124

(continued)

TABLE S3. (continued)

Set Number	Chloroform			Bromodichloromethane			Dibromochloromethane			Bromoform		
	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery	Observed Value (ppb)	Actual Value (ppb)	Percent Recovery
56	201	209	96	31.1	31.9	97	9.3	8.2	113	10.9	9.5	113
57	204	209	97	31.3	31.9	98	9.5	8.2	116	10.8	9.5	114
58	198	209	95	30.7	31.9	96	9.2	8.2	112	10.6	9.5	112
59	215	209	103	33.3	31.9	104	9.7	8.2	118	11.2	9.5	118
60	204	209	98	31.4	31.9	98	9.0	8.2	103	10.3	9.5	108
61	198	209	95	30.7	31.9	96	8.9	8.2	103	10.4	9.5	109
62	199	209	95	29.0	31.9	91	8.5	8.2	104	10.3	9.5	108
63	180	209	86	27.2	31.9	85	8.2	8.2	100	9.6	9.5	101
64	202	213	95	27.4	31.7	86	7.1	7.6	93	8.8	9.2	96
65	207	213	97	28.3	31.7	89	7.3	7.6	96	9.1	9.2	99
66	208	213	98	29.0	31.7	91	7.9	7.6	104	8.9	9.2	97
67	153	149	102	27.7	24.5	113	10.7	9.5	113	11.3	10.0	113
68	149	149	100	27.0	24.0	110	10.5	9.5	111	10.9	10.0	109
Avg ± SD		97 ± 5			100 ± 8			105 ± 16			103 ± 16	

TABLE S4. RECOVERY QUALITY CONTROL DATA FOR THM ANALYSES*

Set Number	Chloroform			Bromodichloromethane			Dibromochloromethane			Bromoform		
	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery
1	233	152	85	39.6	28.4	93	12.2	10.0	90	4.8	1.2	100
2	234	152	86	39.2	29.4	89	12.8	10.0	114	4.7	1.2	98
3	246	152	99	41.5	28.4	108	14.1	11.5	106	5.0	1.4	100
4	246	152	99	39.6	28.4	93	13.7	11.5	90	4.9	1.4	97
5	258	167	96	45.4	31.5	115	17.4	11.5	120	5.1	1.4	103
6	249	167	86	43.7	31.5	101	15.8	10.0	118	4.9	1.4	97
7	267	167	105	44.3	31.5	106	15.3	10.0	108	8.5	1.4	99
8	251	167	88	56.6	31.5	104	15.2	10.0	106	8.2	0.9	101
9	338	167	90	50.3	26.4	99	14.6	10.0	94	7.9	0.9	97
10	314	155	84	48.1	26.4	90	14.7	10.0	96	7.9	0.9	97
11	299	155	76	48.2	26.4	90	15.6	10.0	114	7.7	0.9	94
12	303	155	78	48.7	26.4	92	15.8	10.0	118	8.2	0.9	101
13	303	155	78	49.3	26.4	95	15.4	10.0	110	8.2	0.9	97
14	308	155	81	48.3	26.4	91	14.9	10.0	100	7.9	0.9	97
15	305	155	79	47.8	26.4	88	14.9	10.0	100	8.0	0.9	99
16	249	176	108	29.2	16.5	122	7.9	3.8	129	2.3	0.2	118
17	237	165	79	35.0	25.9	81	12.2	9.3	97	3.5	0.6	104
18	206	127	79	35.7	26.0	73	10.9	8.7	95	4.4	0.7	93
19	250	170	80	45.0	35.4	80	15.1	12.8	88	5.2	0.5	118
20	244	116	117	28.0	19.0	82	9.1	6.9	88	3.1	0.2	112
21	217	113	95	28.7	18.4	94	8.3	7.0	52	2.8	<0.5	108
22	230	113	106	30.6	17.3	120	8.2	5.2	120	3.4	<0.5	131
23	185	106	75	26.5	13.7	81	7.2	3.6	88	4.8	<0.5	100
24	198	106	88	28.6	13.7	94	8.0	3.6	107	5.7	<0.5	119
25	203	115	94	30.0	16.2	86	8.2	4.3	95	5.4	0.4	104
26	204	115	94	29.5	16.2	83	8.1	4.3	93	5.1	0.4	98
27	170	96	70	22.2	9.8	78	5.8	2.2	88	5.0	<0.5	104

*Recovery quality control data are generated by spiking tap water samples with one-half expected analytical concentration.

(continued)

TABLE S4. (continued)

Set Number	Chloroform			Bromodichloromethane			Dibromochloromethane			Bromoform		
	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery	Spiked Result (ppb)	Average of Unspiked Pairs (ppb)	Percent Recovery
28	194	96	93	25.2	9.8	96	6.5	2.2	105	5.7	<0.5	119
29	225	102	104	27.0	9.0	102	5.9	1.2	98	6.5	<0.5	107
30	226	102	104	27.4	9.0	105	6.0	1.2	98	6.9	<0.5	114
31	186	85	94	23.5	8.7	93	5.3	1.9	89	4.8	<0.5	104
32	187	85	94	23.7	8.7	94	5.3	1.9	89	4.8	<0.5	104
33	156	88	91	22.2	8.6	111	6.5	1.7	100	5.6	<0.5	120
Avg ± SD		90 ± 11			95 ± 12			100 ± 14			105 ± 9	

TABLE S5. PRECISION QUALITY CONTROL DATA FOR NPTOC ANALYSIS

Set No	Sample A	Sample B	$\bar{X}_i$	R_i
1	2320	2325	2323	5
2	2373	2364	2369	9
3	1891	1909	1900	18
4	2140	2142	2141	2
5	1768	1729	1749	39
6	2325	2328	2327	3
7	2206	2138	2172	68
8	2392	2396	2394	4
9	2456	2532	2544	24
10	2534	2546	2540	12
11	2607	2588	2598	19
12	2114	2104	2109	10
13	1885	1868	1877	17
14	2109	2084	2097	25
15	2320	2325	2323	5
16	2364	2373	2369	9
17	1891	1909	1990	18
18	2140	2142	2141	2
19	1768	1729	1749	39
20	2325	2328	2327	3
21	2206	2138	2172	68
22	828	763	796	65
23	2392	2396	2394	4
24	2532	2456	2394	76
25	2534	2546	2540	12
26	2607	2588	2598	19
27	2034	1967	2001	67
28	2114	2104	2109	10
29	2489	2499	2494	10
30	1868	1885	1876	17
31	2084	2109	2097	25
32	1799	1880	1839	81
33	2295	2366	2331	71
34	2319	2381	2350	62
35	2437	2461	2449	24
36	2699	2676	2688	23
37	3089	3066	2078	23
38	3055	3023	3039	32
39	3232	3203	3218	29
40	3052	3092	3072	40
41	2873	2994	2934	121
42	3357	3348	3353	9
43	3001	3000	3001	1

(continued)

TABLE S5. (continued)

Set No	Sample A	Sample B	$\bar{X}_i$	R_i
44	2532	2540	2536	8
45	118	181	150	63
46	1576	1581	1579	5
47	2788	2785	2787	3
48	2354	2308	2331	46
49	715	707	711	8
50	2665	2661	2663	4
51	1839	1822	1831	17
52	2564	2546	2555	18
53	2524	2428	2501	46
54	2375	2376	2376	1
55	183	179	181	4
56	97	128	113	31
57	3191	3156	3174	35
58	2842	2911	2877	69
59	2200	2214	2207	14
60	2504	2467	2586	37
61	2915	2921	2918	6
62	2108	2159	2134	51
63	2051	2093	2072	42
64	1739	1745	1742	6
65	1525	1525	1525	0
66	2345	2371	2358	26
67	2027	2037	2032	10

$\sum R_i = 1770$

$\sum x_i = 148190$

$R_c = 0.0391C$

TABLE S6. ACCURACY QUALITY CONTROL DATA FOR NPTOC ANALYSIS

Set No	Observed Value	Actual Value	Percent Recovery
1	1863	2000	93
2	1998	2000	99
3	1911	2000	96
4	1922	2000	96
5	2008	2000	100
6	1993	2000	100
7	1929	2000	96
8	2092	2000	105
9	1965	2000	98
10	2085	2000	104
11	1899	2000	95
12	1936	2000	97
13	2097	2000	105
14	2051	2000	103
15	1859	2000	93
16	1897	2000	95
17	1911	2000	96
18	1969	2000	98
19	1904	2000	95
20	1855	2000	93
21	2085	2000	104
22	1899	2000	95
23	1936	2000	97
24	2097	2000	105
25	2051	2000	103
26	2201	2000	110
27	1807	2000	90
28	1810	2000	91
29	1859	2000	93
30	1897	2000	95
31	1911	2000	96
32	1969	2000	98
33	1904	2000	95
34	1855	2000	93
35	1965	2000	98
36	1929	2000	96
37	1993	2000	100
38	2008	2000	100
39	1911	2000	96
40	1988	2000	99
41	1863	2000	93
42	2126	2000	106

(continued)

TABLE S6. (continued)

Set No	Observed Value	Actual Value	Percent Recovery
43	2093	2000	105
44	2052	2000	103
45	2055	2000	103
46	1990	2000	99
47	2103	2000	105
48	2145	2000	107
49	2039	2000	102
50	1887	2000	94
51	2027	2000	101
52	1833	2000	91
53	1903	2000	95
54	1921	2000	96
55	2068	2000	103
56	1956	2000	97
57	1993	2000	99
58	2140	2000	107
59	2049	2000	102
60	2035	2000	102
61	1949	2000	97
62	2041	2000	102
63	1863	2000	93
64	1958	2000	98
65	1860	2000	93
66	1939	2000	97
67	1948	2000	97
68	1908	2000	95
69	1879	2000	94
70	1948	2000	97
71	2110	2000	105
72	1960	2000	98
73	1950	2000	98
74	1947	2000	97
75	1944	2000	97
76	2095	2000	104
77	2098	2000	105
78	2060	2000	103
79	2156	2000	108
80	2040	2000	102
81	2007	2000	100
82	2044	2000	102
83	2003	2000	100
84	1971	2000	98
85	2021	2000	101

(continued)

TABLE S6. (continued)

Set No	Observed Value	Actual Value	Percent Recovery
86	1911	2000	95
87	1916	2000	96
88	1882	2000	94
89	1842	2000	92
90	1845	2000	92
91	1887	2000	94
92	1999	2000	100
93	1847	2000	92
94	1996	2000	98
95	1895	2000	95
96	1868	2000	93

Avg. $\pm$ SD = 98 $\pm$ 4

TABLE S7. RECOVERY QUALITY CONTROL DATA FOR NPTOC ANALYSIS

Set No	Spiked (ppb)	Unspiked (ppb)	Concentration Recovered (ppb)	Concentration Spiked (ppb)	Recovery (percent)
1	3265	2320	945	1000	95
2	3274	2364	910	1000	91
3	3789	2141	1648	2000	82
4	3642	1802	1840	2000	92
5	4051	2325	1726	2000	86
6	3802	2051	1751	2000	88
7	4304	2396	1908	2000	95
8	4420	2540	1880	2000	94
9	4093	2365	1728	2000	86
10	4415	2691	1724	2000	86
11	4828	2914	1914	2000	96
12	4609	2766	1843	2000	92
13	3526	1821	1705	2000	85
14	2364	3274	910	1000	91
15	2140	3789	1649	2000	82
16	1835	3642	1807	2000	90
17	2325	4051	1726	2000	86
18	2051	3802	1751	2000	88
19	2396	4304	1908	2000	95
20	2494	4443	1949	2000	97
21	2540	4420	1880	2000	94
22	2365	4093	1728	2000	86
23	2691	4415	1724	2000	86
24	2914	4828	1914	2000	96
25	2766	4609	1843	2000	92
26	3523	2430	1093	1000	109
27	3526	2061	1465	2000	73
28	4182	2208	1974	2000	99
29	3469	2415	1054	1000	105
30	3834	2694	1140	1000	114
31	4821	2915	1906	2000	95
32	4077	3092	985	1000	98
33	3945	2994	951	1000	95
34	3938	2955	983	1000	98
35	4034	3047	987	1000	98
36	4475	2540	1935	2000	96
37	4640	2570	2070	2000	103
38	4022	2055	1967	2000	98
39	4457	2477	1980	2000	99
40	3171	1132	2039	2000	101
41	4057	2297	1760	2000	88
42	4367	2419	1948	2000	97
43	3948	2047	1901	2000	95

(continued)

TABLE S7. (continued)

Set No	Spiked (ppb)	Unspiked (ppb)	Concentration Recovered (ppb)	Concentration Spiked (ppb)	Recovery (percent)
44	4203	2112	2091	2000	104
45	3780	2913	867	1000	87
46	2202	261	1941	2000	97
47	3874	1827	2047	2000	102
48	4514	2444	2070	2000	103
49	4177	3009	1168	1000	116
50	3938	2916	1022	1000	102
51	4010	2030	1980	2000	99
52	4002	2151	1851	2000	93
53	2861	992	1869	2000	93
54	3931	2176	1763	2000	88
55	4367	2342	2025	2000	101
56	4026	2158	1868	2000	93
				Avg $\pm$ SD =	93 $\pm$ 14

TABLE S8. PRECISION QUALITY CONTROL DATA FOR NPTOHa ANALYSIS

Set Number	Sample A	Sample B	$\bar{X}_i$	$\bar{R}_i$
1	211	256	234	45
2	166	173	170	7
3	224	243	234	19
4	100	107	104	7
5	121	119	120	2
6	123	141	132	18
7	101	101	101	0
8	124	131	128	7
9	121	121	121	0

Estimated critical difference $R_c = 0.225C$

TABLE S9. ACCURACY QUALITY CONTROL DATA FOR NPTOHa ANALYSIS

Set Number	Observed Value (ppb)	Actual Value (ppb)	Recovery Percent
1	150	126	84
2	200	166	83
3	100	81	81
4	240	182	76
5	360	310	86
6	240	191	80
7	240	183	76
8	320	230	72
9	320	236	74
10	320	222	69
11	320	244	76
12	320	195	81
13	240	173	72
14	224	162	72
15	240	213	89
Average recovery and standard deviation 78 $\pm$ 6			

TABLE S10. RECOVERY QUALITY CONTROL DATA FOR NPTOHa ANALYSIS

Set Number	Spiked (ppb)	Unspiked (ppb)	Concentration Recovered (ppb)	Concentration Spiked (ppb)	Recovery Percent
1	417	173	244	240	102
2	449	234	215	200	108
3	375	234	141	200	71
4	341	161	180	200	90
5	294	161	133	200	67
6	329	132	197	200	99
7	307	132	175	200	88
8	267	127	140	200	70
9	273	121	152	200	76
10	312	121	191	240	80

Average precent recovery and standard deviation 85 $\pm$ 15

TABLE S11. PRECISION QUALITY CONTROL DATA FOR SILVER ANALYSIS

Set Number	Sample A	Sample B	$\bar{X}_i$	R_i
1	6	6	6	0
2	4	6	5	2
3	6	6	6	0
4	6	5	5.5	1
5	<1	<1	<1	0
6	5	6	5.5	1
7	2	2	2	0
8	<1	<1	<1	0
9	5	3	4	2
10	2	3	1.5	1
11	3	5	4	2
12	3	3	3	0
13	<1	<1	<1	0
14	2	2	2	0
15	<1	<1	<1	0
16	<1	<1	<1	0
17	1	1	1	0
18	10	13	11.5	3

$R_c = 0.701\ C$

TABLE S12. ACCURACY QUALITY CONTROL DATA FOR SILVER ANALYSIS

Set Number	Observed Value	Actual Value	Percent Recovery
1	3.1	3.2	97
2	4.0	3.2	125
3	6.1	6.4	95
4	8.9	9.6	93

TABLE S13. RECOVERY QUALITY CONTROL DATA FOR SILVER ANALYSIS

Set Number	Spiked (ppb)	Unspiked (ppb)	Concentration Recovered (ppb)	Concentration Spiked (ppb)	Recovery (percent)
1	1.5	0.2	1.3	1.6	81
2	6.8	5.3	1.5	1.6	94
3	3.2	1.9	1.3	1.6	81
4	3.9	1.5	2.4	3.2	75
5	3.4	1.0	2.4	3.2	75
6	4.2	0.6	3.6	3.2	112
7	3.2	0	3.2	3.2	100
8	31.0	28.0	3.0	3.2	94
9	1.0	0	1.0	1.0	100

Average $\pm$ standard deviation = 92 $\pm$ 166

TABLE S14. PRECISION OF STANDARD PLATE COUNT DATA

Set Number	Plate A	Plate B	$\bar{X}_i$	R_i
1	178	179	178.5	
2	40	50	45	10
3	82	82	82	0
4	23	32	27.5	9
5	140	132	136	8
6	39	40	39.5	1
7	60	70	65	10
8	34	36	35	2
9	70	74	72	4
10	48	50	49	2
11	62	64	63	2
12	43	50	43.5	7
13	145	142	143.5	3
14	44	50	47	6
15	44	40	42	4
16	85	90	87.5	5
17	42	42	42	0
18	135	137	136	2
19	165	150	157.5	15
20	92	80	86	12
21	86	79	82.5	7
22	165	150	157.5	15
23	43	37	40	6
24	135	126	130.5	9
25	40	38	39	2
26	60	65	62.5	5
27	150	165	157.5	15
28	185	210	197.5	25
29	35	40	37.5	5
30	45	48	46.5	3
31	120	121	120.5	1
32	130	140	135	10
33	32	37	34.5	5
34	240	253	246.5	13
35	102	100	101	2
36	60	61	60.5	1
37	100	111	105.5	11
38	93	108	100.5	15
39	77	87	82	10
40	140	150	145	10
41	64	68	66	4
42	165	153	159	12
43	106	102	104	4
44	77	80	78.5	3
45	181	180	180.5	1
46	89	143	116	54

(Continued)

TABLE S14. (continued)

Set Number	Plate A	Plate B	$\bar{X}_i$	R_i
47	120	100	110	20
48	128	120	124	8
49	189	163	176	26
50	45	83	64	38
51	49	47	48	2
52	96	89	92.5	7
53	46	36	41	10

$R_c = 0.301\ C$

TABLE S15. PHYSICAL PROPERTIES OF CARBONS IN STUDY MODELS

Study Model	Approximate Carbon weight (grams)	Carbon Type	Iodine Number
Instapure	27	granular	950
Mini Aqua	16	pelletized	NA
Sears	398	granular	920
H_2OK	94	granular	NA
System 1	1120	granular	860
Aqualux	575	granular	970
Everpure	548	granular	1240
	217	powdered	800*

*May be biased due to the presence of a propiatary binder blended with the carbon

NA - not available at time of report.

TABLE S16. TRIHALOMETHANE AND NONPURGEABLE TOTAL ORGANIC CARBON CONCENTRATIONS IN INFLUENT WATER

Date	Trihalomethanes (ppb)					NPTOC (ppb)
	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total THM	
7-17-78	159	22.3	7.5	<0.5	188	2107
7-18-78	164	25.5	8.7	0.6	198	1810
7-19-78	173	30.4	10.4	0.8	214	1955
7-20-78	175	31.2	11.1	0.9	218	1918
7-21-78	166	25.5	8.3	0.7	200	1903
7-22-78	191	25.2	8.4	0.7	255	1945
7-23-78	192	26.0	7.1	0.5	225	2109
7-24-78	202	23.6	6.2	<0.5	231	1977
7-25-78	205	22.8	6.9	<0.5	234	1895
7-26-78	-	-	-	-	-	2069
7-28-78	147	17.5	4.9	<0.5	169	2276
7-31-78	210	26.0	7.3	<0.5	243	2482
8-1-78	131	17	3.6	<0.5	151	2327
8-7-78	184	23.6	6.9	<0.5	214	2092
8-8-78	166	17.8	4.4	0.5	188	2141
8-9-78	166	16.4	4.1	<0.5	186	2344
8-10-78	182	18.3	4.7	<0.5	205	2391
8-11-78	168	16.8	3.9	<0.5	189	2479
8-12-78	174	17.0	4.0	<0.5	195	2502
8-13-78	184	17.5	4.3	<0.5	205	2587
8-14-78	198	20.7	5.5	<0.5	224	2469
8-15-78	186	18.6	4.7	<0.5	209	2384
8-16-78	179	16.5	3.7	<0.5	199	2358
8-17-78	226	21.4	5.7	<0.5	253	2252
8-18-78	220	28.3	7.9	<0.5	256	2551
8-19-78	204	33.2	10.9	<0.5	248	2493
8-20-78	198	32.4	10.3	<0.5	240	2562
8-22-78	200	31.8	10.1	<0.5	241	2049
8-23-78	206	31.9	9.9	<0.5	247	2404
8-25-78	195	29.0	8.6	<0.5	232	2554
8-27-78	206	32.3	10.1	<0.5	248	2252
8-28-78	185	28.5	8.8	<0.5	222	2456
8-29-78	192	30.5	9.4	<0.5	231	2427
8-30-78	173	27.3	8.9	<0.5	209	2417
8-31-78	197	32.0	10.2	<0.5	239	2084
9-1-78	197	34.3	11.4	<0.5	242	2136
9-2-78	213	37.3	12.6	0.6	263	2057
9-5-78	213	38.1	12.6	0.6	264	2066
9-6-78	205	32.6	12.2	<0.5	249	2061
9-7-78	191	34.7	11.6	<0.5	237	2115
9-8-78	189	33.2	11.0	<0.5	233	2335
9-9-78	190	35.8	12.6	0.5	238	2257
9-10-78	199	36.2	12.0	<0.5	247	1932
9-11-78	241	42.0	14.5	0.6	298	2208
9-12-78	203	40.2	14.2	0.8	258	2363
9-13-78	212	41.7	14.8	0.8	269	2385

(continued)

TABLE S16. (continued)

Date	Trihalomethanes (ppb)					NPTOC (ppb)
	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total THM	
9-14-78	206	41.3	15.2	1.1	263	2458
9-15-78	204	41.8	15.6	1.2	262	2461
9-16-78	238	45.2	12.2	1.3	296	2449
9-17-78	190	36.5	13.5	1.2	241	2251
9-18-78	202	36.6	13.4	1.1	253	2564
9-19-78	161	28.9	10.1	1.1	201	2586
9-20-78	170	32.1	11.4	1.3	214	2670
9-22-78	164	31.1	10.7	0.8	206	2694
9-23-78	178	30.1	10.3	0.7	219	2711
9-24-78	181	30.8	10.1	0.7	222	2701
9-25-78	215	37.0	12.8	1.2	266	2967
9-27-78	225	40.5	13.7	1.3	280	2906
9-29-78	185	31.7	9.9	0.7	227	3115
10-4-78	176	30.7	10.5	0.8	218	2658
10-5-78	221	34.3	11.6	0.7	267	2821
10-6-78	179	33.7	11.7	0.7	225	2925
10-9-78	160	28.0	9.3	<0.5	197	3023
10-11-78	223	33.8	9.5	<0.5	266	3374
10-13-78	262	34.3	8.4	<0.5	304	3218
10-15-78	248	35.2	8.2	<0.5	291	3259
10-16-78	233	35.9	8.6	<0.5	277	3401
10-17-78	246	37.0	8.0	<0.5	291	3399
10-18-78	215	32.0	7.6	<0.5	254	3072
10-21-78	235	36.8	9.0	<0.5	280	2873
10-22-78	224	37.9	9.3	<0.5	271	3109
10-23-78	207	31.2	9.8	<0.5	248	3353
10-25-78	183	35.1	9.9	<0.5	228	3320
10-27-78	202	38.2	11.1	<0.5	251	3122
10-29-78	201	40.3	11.9	<0.5	253	2955
10-31-78	200	40.6	12.1	<0.5	252	3024
11-1-78	-	-	-	-	-	3000
11-3-78	155	34.5	11.8	0.6	201	2766
11-6-78	126	27.8	9.6	<0.5	163	2732
11-23-78	611	17	6.1	<0.5	634	2683
11-24-78	488	17	6.4	<0.5	511	2777
11-25-78	645	22	7.7	<0.5	674	2688
11-26-78	315	16	5.8	<0.5	336	2780
11-27-78	310	15	5.7	<0.5	330	2635
11-28-78	340	35	12.3	<0.5	387	2594
11-30-78	408	40	15	<0.5	463	2451
12-1-78	375	35.0	13.8	<0.5	423	2582
12-2-78	362	30.5	12.2	<0.5	404	2555
12-3-78	297	32.6	12.8	<0.5	342	2615
12-4-78	383	31.8	11.9	<0.5	426	2600
12-5-78	488	31.7	12.2	<0.5	531	2471
12-6-78	370	23.3	9.5	<0.5	402	2427

TABLE S16. (continued)

Date	Trihalomethanes (ppb)					NPTOC (ppb)
	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total THM	
12-7-78	330	26.8	10.8	<0.5	367	2389
12-8-78	324	31.7	11.7	<0.5	367	2444
12-9-78	282	29.4	12.6	<0.5	324	2520
12-10-78	303	32.0	12.8	<0.5	347	2669
12-11-78	198	21.0	9.0	<0.5	228	2894
12-12-78	255	20	7.8	<0.5	282	2811
12-13-78	435	23	8.0	<0.5	466	3162
12-14-78	553	23.8	7.5	<0.5	584	3148
12-15-78	503	21.0	6.4	<0.5	530	3199
12-16-78	416	19.3	5.7	<0.5	441	3112
12-18-79	542	17.9	5.5	<0.5	565	2899
12-19-78	533	10.3	2.5	<0.5	545	2817
12-20-78	388	12.8	3.8	<0.5	404	2730
12-21-78	373	12.8	2.8	<0.5	388	2670
12-22-78	390	14.0	4.0	<0.5	408	2671
12-23-78	460	9.0	1.0	<0.5	470	2629
12-24-78	345	10.7	<0.5	<0.5	355	2541
12-25-78	375	11.3	3.5	<0.5	389	-
12-26-78	385	12.0	3.5	<0.5	400	2588
12-27-78	402	9.4	3.0	<0.5	414	2623
12-28-78	475	10	3	<0.5	488	2588
12-29-78	463	9.8	2.8	<0.5	475	2643
12-30-78	535	10.8	2.8	<0.5	548	2664
12-31-78	295	10.3	1.1	<0.5	306	2680
1-1-79	238	8.0	2.8	<0.5	248	2487
1-2-79	249	7.8	2.3	<0.5	259	2530
1-3-79	265	8.8	2.5	<0.5	276	2638
1-4-79	233	7.8	2.0	<0.5	242	2811
1-5-79	228	9.3	2.5	<0.5	239	2992
1-6-79	218	7.3	2.3	<0.5	227	3464
1-7-79	208	7.0	2.3	<0.5	217	2915
1-8-79	295	8.0	2.3	<0.5	305	2898
1-9-79	260	6.8	2.3	<0.5	269	2887
1-10-79	310	8.3	2.8	<0.5	321	2776
1-11-79	255	7.3	1.5	<0.5	263	2584
1-12-79	220	8.8	2.8	<0.5	231	2752
1-13-79	275	9.0	2.5	<0.5	286	2754
1-14-79	335	14.3	3.8	<0.5	353	2906
1-15-79	390	14.0	4.8	<0.5	408	2894
1-16-79	310	11.5	4.3	<0.5	325	2784
1-17-79	333	14.8	3.0	<0.5	350	2134
1-18-79	158	9.0	4.0	<0.5	171	2094
1-20-79	283	13.0	2.3	<0.5	298	2075
1-21-79	218	9.8	4.0	<0.5	231	2117
1-22-79	223	9.5	2.3	<0.5	234	2055
1-23-79	195	9.7	3.1	<0.5	207	2047

(continued)

TABLE S16. (continued)

Date	Trihalomethanes (ppb)					NPTOC (ppb)
	$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total THM	
1-24-79	267	7.4	<1.0	<0.5	274	2377
1-25-79	223	6.5	<1.0	<0.5	229	2471
1-26-79	225	6.5	<1.0	<0.5	231	2323
1-27-79	258	6.8	<1.0	<0.5	264	-
1-28-79	238	7.0	<1.0	<0.5	245	2596
1-30-79	295	8.0	1.3	<0.5	304	2476
1-31-79	288	8.3	1.3	<0.5	297	2757
2-1-79	423	7.3	1.2	<0.5	431	2535
2-2-79	410	7.3	<1.0	<0.5	417	2473
2-3-79	215	7.0	<1.0	<0.5	222	2284
2-4-79	210	8.5	1.3	<0.5	219	2229
2-6-79	290	9.3	3.3	<0.5	302	2137
2-7-79	341	9.3	2.4	<0.5	352	2117
2-8-79	290	7.3	2.5	<0.5	299	2065
2-10-79	419	8.3	1.5	<0.5	428	2133
2-11-79	360	8.3	1.4	<0.5	369	2106
2-13-79	250	7.0	<0.5	<0.5	257	2037
2-14-79	190	6.6	1.2	<0.5	197	2015
2-15-79	268	8.1	<0.5	<0.5	276	2346
2-16-79	235	8.5	2.8	<0.5	246	2341

TABLE S17. ORGANIC CHEMICAL DATA - INSTAPURE
AMBIENT WATER TEST AT 0.5 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-1-1	7-17-78	∿2	93	11.0	3.7	<0.5	108	1609
	7-18-78	39	127	16.9	4.8	<0.5	148	1653
	7-19-78	77	141	21.3	6.2	<0.5	169	1762
	7-22-78	94	162	20.9	5.5	<0.5	188	1829
	7-23-78	140	165	20.4	4.8	<0.5	190	1955
	7-24-78	179	179	19.2	4.5	<0.5	202	1975
	7-25-78	212	182	17.9	5.6	<0.5	205	1946
1-1-2	8-10-78	4	98	8.3	2.2	<0.5	108	1789
	8-11-78	60	71	8.1	2.2	<0.5	82	2274
	8-12-78	101	145	12.6	2.9	<0.5	160	2383
	8-15-78	139	142	12.3	2.8	<0.5	157	2248
	8-16-78	194	153	12.6	2.8	<0.5	168	2381
	8-17-78	236	190	15.6	3.9	<0.5	209	2072
1-1-3	8-10-78	4	88	7.6	2.2	<0.5	97	1805
	8-11-78	69	120	10.8	2.4	<0.5	133	2266
	8-14-78	126	147	13.7	3.6	<0.5	164	----
	8-15-78	152	157	13.6	3.4	<0.5	174	2360
	8-16-78	210	154	12.4	2.7	<0.5	169	2207
Average influent for test period			184	22.1	6.5	<0.5	212	2193

TABLE S18. ORGANIC CHEMICAL DATA - INSTAPURE SPIKE WATER TEST AT 1.5 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-1-4	12-31-78	8	202	7.1	3.8	<0.5	212	2511
	1-1-79	54	182	6.4	1.3	<0.5	189	2504
	1-2-79	100	175	6.0	1.3	<0.5	182	2420
	1-5-79	146	175	6.8	1.3	<0.5	183	2893
1-1-5	1-23-79	3	150	6.8	<0.5	<0.5	156	1786
	1-24-79	30	188	4.6	<1.0	<0.5	192	2018
	1-25-79	61	178	4.3	<1.0	<0.5	182	2454
	1-26-79	92	173	4.3	<1.0	<0.5	177	2176
	1-27-79	123	223	5.5	<1.0	<0.5	228	2278
	1-30-79	151	233	5.8	<1.0	<0.5	238	2684
	1-31-79	180	245	6.5	<1.0	<0.5	251	2449
1-1-6	1-23-79	3	123	5.0	<0.5	<0.5	128	1650
	1-24-79	49	185	4.3	<1.0	<0.5	189	1983
	1-25-79	94	192	5.2	<1.0	<0.5	197	2472
	1-28-79	140	213	5.8	<1.0	<0.5	218	2459
	1-30-79	229	258	6.5	<1.0	<0.5	264	2342
Average influent for test period			250	8.0	1.7	<0.5	259	2642

TABLE S19. ORGANIC CHEMICAL DATA - MINI AQUA
AMBIENT WATER TEST AT 0.5 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-2-1	7-17-78	1	158	21.1	7.3	0.5	186	2132
	7-18-78	44	157	24.4	8.2	0.6	190	1722
	7-19-78	81	168	29.0	9.7	0.8	207	1873
	7-22-78	114	197	23.6	8.6	0.7	229	1906
	7-23-78	143	186	25.0	6.6	0.5	218	2084
	7-24-78	178	198	22.6	5.9	<0.5	226	1922
	7-25-78	210	192	20.4	6.9	<0.5	219	1922
1-2-2	8-10-78	2	172	17.1	4.5	<0.5	193	2379
	8-11-78	42	155	15.5	3.5	<0.5	174	2531
	8-12-78	83	172	16.7	4.0	<0.5	192	2461
	8-15-78	120	157	15.5	3.5	<0.5	176	2424
	8-16-78	174	180	16.0	3.7	<0.5	199	2225
	8-17-78	211	206	19.1	5.1	<0.5	230	2310
1-2-3	8-10-78	2	180	17.8	4.5	<0.5	202	2393
	8-11-78	64	157	15.8	3.5	<0.5	176	2457
	8-12-78	74	177	17.1	4.0	<0.5	198	2489
	8-15-78	112	157	15.6	3.6	<0.5	176	2384
	8-16-78	163	166	15.2	3.6	<0.5	184	2176
	8-17-78	226	219	20.5	5.3	<0.5	244	2295
Average influent for test period			184	22.1	6.5	<0.5	212	2193

TABLE S20. ORGANIC CHEMICAL DATA - SEARS
AMBIENT WATER TEST AT 2.0 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-3-1	7-18-78	6	7.2	<0.5	<0.5	<0.5	7.2	615
	7-19-78	610	50	2.8	0.3	<0.5	53	1598
	7-20-78	1194	88	7.4	1.1	<0.5	97	1719
	7-23-78	1816	118	9.7	1.2	<0.5	128	1908
	7-24-78	2221	145	11.6	1.6	<0.5	158	1823
	7-26-78	3563	148	12.7	2.2	<0.5	162	1980
1-3-2	8-23-78	5	2.6	<0.5	<0.5	<0.5	2.6	986
	8-25-78	456	48.4	3.6	1.0	<0.5	53	2083
	8-29-78	932	95	8.8	2.5	<0.5	106	2106
	9-2-78	1742	105	4.9	1.0	<0.5	110	1790
	9-6-78	2072	118	14.9	4.2	<0.5	137	1854
	9-9-78	2683	155	20.6	5.6	<0.5	181	2021
	9-13-78	3456	188	28.5	8.3	<0.5	224	2254
1-3-3	8-7-78	10	0.7	<0.5	<0.5	<0.5	0.7	793
	8-9-78	395	26	1.0	0.5	<0.5	27	1946
	8-12-78	941	75	4.2	1.2	<0.5	81	2181
	8-13-78	1088	83	4.4	1.5	ND	88	2272
	8-18-78	1752	137	9.8	2.4	<0.5	149	2271
	8-20-78	2091	142	14.0	4.0	<0.5	160	2287
	8-22-78	2549	159	14.8	3.7	<0.5	177	1612
	8-28-78	3402	168	17.7	4.3	<0.5	190	2317
Average influent for test period			191.5	28.7	9.0	0.7	229	2164

TABLE S21. ORGANIC CHEMICAL DATA - SEARS
SPIKE WATER TEST AT 2.5 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-3-4	12-2-78	8	13	<0.5	<0.5	<0.5	13	1224
	12-3-78	699	140	10.6	3.4	<0.5	154	2349
	12-4-78	1261	214	14.8	4.5	<0.5	233	2373
	12-7-78	1844	210	14.0	5.5	<0.5	229	2194
	12-8-78	2324	270	20.8	7.0	<0.5	297	2298
	12-10-78	3332	178	16	6.8	<0.5	200	2634
	12-11-78	3880	188	16	6.8	<0.5	210	2742
1-3-5	12-2-78	8	12	0.7	<0.5	<0.5	12.7	1126
	12-3-78	215	70	4.2	1.7	<0.5	75	2054
	12-6-78	878	223	8.8	2.8	<0.5	234	2233
	12-13-78	1971	330	4.8	4.8	<0.5	348	2898
	12-16-78	2606	385	4.3	4.3	<0.5	403	2911
	12-20-78	3513	369	1.8	1.8	<0.5	463	2679
1-3-6	12-24-78	182	45	0.4	<0.5	<0.5	45.4	1114
	12-29-78	852	425	6.0	2.3	<0.5	433	1972
	1-5-79	1805	218	4.3	1.8	<0.5	224	2576
	1-10-79	2680	305	6.0	<0.5	<0.5	311	2603
	1-15-79	3530	430	13.5	2.8	<0.5	446	2506
Average influent for test period			347	15.9	5.4	<0.5	368	2682

TABLE S22. ORGANIC CHEMICAL DATA - H_2OK
AMBIENT WATER TEST AT 0.2 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-4-1	7-17-78	2	31.9	2.4	1.3	<0.5	35.6	1931
	7-18-78	92	73	5.9	1.0	<0.5	80	1389
	7-21-78	305	127	14.3	3.3	<0.5	144	1618
	7-25-78	583	129	11.6	2.3	<0.5	142	1786
	7-31-78	988	182	26	4.9	<0.5	212	2302
	8-8-78	1357	131	14.4	2.8	<0.5	148	2053
	8-11-78	1566	146	15.5	3.3	<0.5	154	2326
	8-14-78	1753	178	18.6	4.4	<0.5	201	2387
	8-18-78	2045	198	22.7	5.7	<0.5	226	2629
1-4-2	8-9-78	4	37.4	2.6	1.2	<0.5	41.2	1647
	8-20-78	210	139	11.9	3.1	<0.5	154	2410
	9-2-78	491	177	22.2	5.8	<0.5	205	1764
	9-14-78	734	194	32.5	9.4	<0.5	235	2379
	10-9-78	1277	189	34.3	6.8	<0.5	230	2915
	10-21-78	1535	228	34.9	7.4	<0.5	270	2864
	10-31-78	1755	209	39.1	9.8	<0.5	257	2893
	11-6-78	2000	126	25.9	7.3	<0.5	159	2544
1-4-3	8-9-78	4	25.5	1.3	0.7	<0.5	27.5	1542
	8-20-78	230	152	11.6	2.8	<0.5	166	2002
	9-2-78	484	191	23.0	5.4	<0.5	219	1863
	9-14-78	739	184	28.6	7.2	<0.5	219	2266
	10-9-78	1395	210	34.4	8.9	<0.5	253	3039
	10-21-78	1500	231	36.5	8.3	<0.5	275	2916
	10-31-78	1659	210	38.3	9.3	<0.5	257	2885
	11-6-78	2000	121	25.1	7.0	<0.5	153	2532
Average influent for test period			194	30.3	9.5	<0.5	234	2522

TABLE S23. ORGANIC CHEMICAL DATA - H_2OK
SPIKE WATER TEST AT 0.2 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-4-4	11-23-78	4	173	3.0	1.6	<0.5	177	1786
	11-30-78	403	279	18.0	3.2	<0.5	300	2192
	12-4-78	572	306	19.9	5.0	<0.5	330	2269
	12-13-78	938	238	15	5.5	<0.5	258	2505
	1-11-79	2136	265	7.8	3.0	<0.5	275	2634
1-4-5	11-23-78	4	105	1.3	1.2	<0.5	107	1930
	12-9-78	247	182	10.1	2.1	<0.5	194	2277
	12-26-78	494	306	11.3	1.9	<0.5	319	2271
	2-3-79	976	235	8.5	2.5	<0.5	246	2414
	2-15-79	1115	233	7.8	<0.5	<0.5	240	2159
1-4-6	11-23-78	4	95	1.0	<0.5	<0.5	96	2047
	12-9-78	258	209	11.1	2.8	<0.5	221	2028
	12-26-78	501	360	12.1	3.0	1.1	376	2304
	2-4-79	1016	253	9.3	1.5	<0.5	263	2171
	2-15-79	1126	254	8.0	1.5	<0.5	263	2164
Average influent for test period			335	14.1	4.5	<0.5	353	2595

TABLE S24. ORGANIC CHEMICAL DATA - SYSTEM 1
AMBIENT WATER TEST AT 0.6 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-5-1	7-18-78	37	16.7	<0.5	<0.5	<0.5	16.7	877
	7-20-78	896	100	9.7	1.8	<0.5	111	1599
	7-23-78	1346	116	10.4	1.2	<0.5	127	1701
	7-24-78	1763	150	13.2	1.8	<0.5	165	1753
	7-25-78	2176	95	7.3	1.1	<0.5	103	1653
	7-26-78	2590	120	10.2	1.7	<0.5	131	1899
1-5-2	8-7-78	17	5.8	<0.5	<0.5	<0.5	5.8	887
	8-10-78	349	37.3	1.1	<0.5	<0.5	38.4	1759
	8-13-78	667	68	2.5	<0.5	ND	70	1922
	8-16-78	1072	95	4.2	0.9	<0.5	100	2027
	8-19-78	1233	127	7.8	1.9	<0.5	136	2186
	8-22-78	1585	159	11.4	2.5	<0.5	172	2016
	8-25-78	1904	103	7.5	1.4	<0.5	111	2005
	9-2-78	2628	187	19.2	4.2	<0.5	210	1794
1-5-3	8-7-78	17	8.3	<0.5	<0.5	<0.5	8.3	643
	8-10-78	312	48	1.4	<0.5	<0.5	49.4	1739
	8-13-78	605	87	3.7	<0.5	<0.5	90	1863
	8-16-78	954	115	6.3	1.2	<0.5	122	1840
	8-22-78	1320	147	9.7	2.0	<0.5	158	1869
	8-25-78	1612	167	13.4	2.5	<0.5	182	2078
	8-29-78	1859	170	15.2	2.9	<0.5	188	2085
	9-5-78	2554	184	21.4	4.5	<0.5	209	1814
Average influent for test period			189	26.0	7.9	<0.5	231	2244

TABLE S25. ORGANIC CHEMICAL DATA - SYSTEM 1
SPIKE WATER TEST AT 0.6 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-5-4	11-30-78	27	21	<0.5	<0.5	<0.5	21	708
	12-1-78	271	158	5.8	2.5	<0.5	166	1863
	12-2-78	537	345	18.3	5.0	<0.5	368	2007
	12-3-78	817	207	12.9	2.9	<0.5	222	2123
	12-7-78	1399	249	15.2	3.4	<0.5	267	1987
	12-9-78	1949	278	19.8	6.0	<0.5	303	2241
	12-10-78	2301	180	12.0	5.3	<0.5	197	2379
	12-11-78	2598	220	16.5	6.0	<0.5	242	2676
1-5-5	11-30-78	29	9	<0.5	<0.5	<0.5	9	754
	12-4-78	409	111	3.2	1.2	<0.5	115	1828
	12-8-78	673	103	3.7	1.4	<0.5	108	1828
	12-18-78	1299	345	10.2	3.0	<0.5	358	2389
	12-29-78	1836	348	8.8	2.3	<0.5	360	2215
	1-11-79	2689	340	8.8	2.3	<0.5	351	2472
1-5-6	12-18-78	16	48	<0.5	<0.5	<0.5	48.5	1514
	12-30-78	664	425	6.0	2.3	<0.5	433	1972
	1-12-79	1260	198	2.8	<0.5	<0.5	200	2318
	1-24-79	1882	213	3.3	<1.0	<0.5	216	1739
	2-7-79	2570	255	4.5	<0.5	<0.5	259	1849
Average influent for test period			328	14.3	4.5	<0.5	346	2630

TABLE S26. ORGANIC CHEMICAL DATA - AQUALUX
AMBIENT WATER TEST AT 0.6 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-6-1	7-18-78	14	8.0	<0.5	<0.5	<0.5	8.0	625
	7-21-78	602	72	4.8	1	<0.5	78	1268
	7-23-78	999	114	8.7	1.3	<0.5	124	1624
	7-28-78	1581	40.4	2.5	0.5	<0.5	42.9	1784
	8-1-78	2228	106	13.5	2.5	<0.5	122	2019
1-6-2	8-9-78	20	6.2	0.5	0.5	<0.5	6.2	579
	8-13-78	558	48.5	1.8	0.5	<0.5	50	1651
	8-17-78	576	107	5.0	1	<0.5	113	2030
	8-20-78	715	121	7.6	1.9	<0.5	130	1992
	8-27-78	1055	154	11.3	2.3	<0.5	167	1926
	8-30-78	1223	142	11.2	2.4	<0.5	155	1753
	9-5-78	1570	187	19.0	3.9	<0.5	209	1676
	9-8-78	1728	203	20.3	3.9	<0.5	227	1907
	9-12-78	2180	201	26.3	6.1	<0.5	233	2050
1-6-3	8-9-78	20	7.6	0.5	0.5	<0.5	7.6	528
	8-13-78	298	45.8	1.5	0.5	<0.5	47.3	1565
	8-17-78	671	109	4.7	0.7	<0.5	114	1996
	8-20-78	809	107	6.1	1.2	<0.5	114	1916
	8-25-78	1030	137	8.9	2.0	<0.5	147	1775
	8-30-78	1403	153	12.1	2.5	<0.5	167	1868
	9-2-78	1575	173	15.5	3.3	<0.5	191	1624
	9-6-78	1907	148	15.4	2.8	<0.5	166	1672
	9-8-78	2075	186	20.2	4.2	<0.5	210	1908
Average influent for test period			186	27.6	8.7	<0.5	223	2251

TABLE S27. ORGANIC CHEMICAL DATA - AQUALUX
SPIKE WATER TEST AT 0.6 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-6-4	11-30-78	15	21	0.8	0.9	<0.5	22.7	807
	12-2-78	432	126	6.3	1.8	<0.5	134	1885
	12-3-78	643	146	8.1	2.1	<0.5	156	2000
	12-4-78	899	167	8.8	2.5	<0.5	178	2021
	12-7-78	1137	223	12.1	2.8	<0.5	237	1946
	12-9-78	1670	288	18.3	5.0	<0.5	311	2170
	12-10-78	1893	215	13	1.9	<0.5	230	2353
	12-12-78	2063	198	14.5	2.0	<0.5	216	--
1-6-5	11-30-78	15	22	0.8	0.9	<0.5	23.7	724
	12-4-78	217	82	2.5	1.3	<0.5	85	1670
	12-12-78	560	78	3.3	0.9	<0.5	82	2241
	12-18-78	920	238	5.9	2.8	<0.5	246	2221
	1-2-79	1471	263	5.8	2.3	<0.5	271	2000
	1-13-79	2024	250	6.5	1.3	<0.5	257	2432
1-6-6	12-18-78	9	70	1.1	0.8	<0.5	71	1209
	12-28-78	505	149	2.5	0.9	<0.5	152	1896
	1-7-79	981	215	2.5	<0.5	<0.5	217	2218
	1-10-79	1058	213	2.8	<0.5	<0.5	215	2073
	1-21-79	1546	315	8.5	1.8	<0.5	325	1734
	1-31-79	1977	233	4.3	<1.0	<0.5	237	2015
Average influent for test period			329	14.2	4.8	<0.5	348	2664

TABLE S28. ORGANIC CHEMICAL DATA - EVERPURE
SPIKE WATER TEST AT 0.6 GPM FLOW RATE

Test Run Number	Test Date	Gallons Processed	Effluent THM (ppb)					Effluent NPTOC (ppb)
			$CHCl_3$	$CHCl_2Br$	$CHClBr_2$	$CHBr_3$	Total	
1-7-1	12-2-78	9	4.0	<0.5	<0.5	<0.5	4.0	683
	12-3-78	172	4.9	<0.5	<0.5	<0.5	4.9	1161
	12-4-78	364	15.0	<0.5	<0.5	<0.5	15.0	1502
	12-7-78	577	14.0	<0.5	<0.5	<0.5	14.0	1515
	12-8-78	749	10.0	<0.5	<0.5	<0.5	10.0	1641
	12-9-78	811	19.0	<0.5	<0.5	<0.5	19.0	1845
	12-10-78	995	20.0	<0.5	<0.5	<0.5	20.0	2105
	12-11-78	1329	31.0	<0.5	<0.5	<0.5	31.0	2119
1-7-2	12-18-78	9	2.0	<0.5	<0.5	<0.5	2.0	697
	12-23-78	256	1.5	<0.5	<0.5	<0.5	1.5	1218
	1-2-79	694	13.0	<0.5	<0.5	<0.5	13.0	1731
	1-8-79	852	20.0	<0.5	<0.5	<0.5	20.0	2168
	1-11-79	1010	38.0	<0.5	<0.5	<0.5	38.0	2021
1-7-3	1-17-79	9	0.5	<0.5	<0.5	<0.5	0.5	497
	1-22-79	265	1.7	<0.5	<0.5	<0.5	1.7	1926
	1-26-79	472	3.0	<0.5	<0.5	<0.5	3.0	2562
	2-6-79	950	10.0	<0.5	<0.5	<0.5	10.0	1525
	2-7-79	994	10.0	<0.5	<0.5	<0.5	10.0	1372
Average influent for test period			317	13.0	4.0	<0.5	334	2573

TABLE S29. NONPURGEABLE ORGANIC HALIDE DATA

Test Model	Test Run	Gallons Processed	Concentration of NPTOHa (ppb) Influent	Effluent	Percent Removal
Instapure	1-1-2	4	80	151	-(96)
		130	116	135	-(16)
		235	117	127	-(8.5)
	1-1-3	4	80	104	-(30)
		205	85	100	-(18)
	1-1-4	8	131	94	28
		125	77	127	-(65)
	1-1-5	3	77	111	-(44)
		90	116	133	-(15)
		179	131	36	73
	1-1-6	3	44	51	-(16)
		134	116	93	20
		228	55	39	29
Mini Aqua	1-2-2	2	80	181	-(126)
		121	116	123	-(6)
		211	117	107	8.5
	1-2-3	2	80	126	-(58)
		109	116	129	-(11)
		224	117	100	-(15)
Sears	1-3-2	∿10	67	77	-(16)
		1730	48	89	-(85)
	1-3-2	3450	70	93	-(33)
	1-3-3	10	80	33	59
		1740	95	84	12
		3394	45	108	-140
	1-3-4	10	115	17	85
		1806	110	77	30
		3845	109	109	0
	1-3-5	10	115	23	80
		1947	126	60	54
		3480	117	152	-(30)
	1-3-6	10	104	26	75
		1780	77	136	-(77)
		3500	108	41	62
H_2OK	1-4-2	4	136	72	47
		1277	85	96	-(13)
		2000	107	119	-(11)
	1-4-3	4	136	61	55
		1395	85	115	-(35)
		2000	107	121	-(13)

(continued)

TABLE S29. (continued)

Test Model	Test Run	Gallons Processed	Concentration of NPTOHa (ppb) Influent	Effluent	Percent Removal
H_2OK (continued)	1-4-4	4	159	41	74
		936	126	115	9
		2135	53	76	-(43)
	1-4-5	4	159	75	53
		975	76	80	-(5)
	1-4-6	4	159	78	51
		1009	76	68	51
System 1	1-5-2	~17	80	39	51
		1230	35	<10	71
		2760	51	103	-(102)
	1-5-3	~17	80	38	53
		1311	71	100	-(41)
		2547	100	129	-(12)
	1-5-4	1380	110	69	37
		2580	109	75	31
	1-5-5	29	114	33	71
		1295	88	94	-(7)
		2644	53	77	-(34)
	1-5-6	9	88	25	72
		1254	74	56	24
		2566	69	70	-(1)
Aqualux	1-6-2	~20	136	25	82
		1051	72	70	3
		2180	68	90	-(32)
	1-6-3	~20	136	19	86
		1035	45	38	16
	1-6-4	15	114	56	51
		2150	110	90	18
	1-6-5	15	114	28	75
		908	88	88	0
		2038	92	36	61
	1-6-6	9	88	46	48
		1056	101	41	59
		1975	131	41	69
Everpure	1-7-1	9	115	0	100
		563	110	22	80
		1320	109	56	49
	1-7-2	9	88	3	97
		691	141	22	84
		1007	53	26	51
	1-7-3	10	96	2	98
		496	116	36	69
		992	69	23	67

TABLE S30. BACTERIAL, PHYSICAL, AND CHEMICAL PROPERTIES OF INFLUENT TEST WATER

Date	Standard Plate Counts/ml	Endotoxin (µg/ml)	Free Chlorine[1] (ppm)	Free Chlorine[2] (ppm)	Water temperature (°C)	Ambient laboratory temperature (°C)
7-17-78	-	-	-	0.00	26.5	24.0
7-18-78	-	-	-	0.00	26.5	24.5
7-19-78	-	-	-	0.00	26.5	24.0
7-20-78	-	-	-	0.00	26.0	23.5
7-21-78	-	-	-	0.00	26.5	23.5
7-22-78	-	-	-	0.00	26.0	23.5
7-23-78	-	-	-	0.00	26.5	23.5
7-24-78	-	-	-	0.00	25.5	23.5
7-25-78	-	-	-	0.00	26.5	24.5
7-26-78	-	-	-	0.00	26.5	25.0
7-28-78	-	-	-	0.00	27.0	24.0
7-31-78	-	-	-	0.00	27.5	24.0
8-1-78	-	-	-	0.00	27.5	24.0
8-7-78	8000	0.9	-	0.09	27.5	23.5
8-8-78	-	-	-	0.00	27.5	23.0
8-9-79	-	0.5	-	0.00	27.0	23.0
8-10-78	-	0.3	-	0.00	27.0	22.5
8-11-78	-	1.8	0.00	0.00	27.0	22.5
8-12-78	2000	5.5	0.00	0.00	27.5	24.0
8-13-78	4700[d]	4.3	0.00	0.00	27.0	24.0
8-14-78	15000[d]	8.4	0.00	0.00	27.0	23.5
8-15-78	9400[d]	9.0	0.00	0.00	27.0	23.0
8-17-78	6600	5.5	0.00	0.00	27.0	24.0
8-18-78	6900	6.8	0.00	0.00	27.5	24.0
8-19-78	7000	4.3	0.00	0.00	27.5	24.5
8-20-78	22000	3.0	0.00	0.00	27.5	24.0
8-22-78	10000	7.5	0.00	0.00	27.5	25.0
8-23-78	24000	4.4	0.00	0.00	27.5	24.5
8-24-78	2100	3.6	-	-	27.0	24.5
8-25-78	11000	2.0	0.00	0.00	26.5	24.0
8-27-78	900	2.0	0.00	0.00	27.5	25.0
8-28-78	5000	3.8	0.00	0.00	26.5	24.5

(continued)

TABLE S30. (continued)

Date	Standard Plate Counts/ml	Endotoxin (μg/ml)	Free Chlorine[1] (ppm)	Free Chlorine[2] (ppm)	Water temperature (°C)	Ambient laboratory temperature (°C)
8-29-78	39000[d]	4.3	0.00	0.00	26.5	23.5
8-30-78	3300	2.8	0.00	0.00	26.0	23.0
8-31-78	1200	2.0	0.00	–	26.0	23.5
9-1-78	650	4.3	0.00	0.07	25.5	23.5
9-2-78	–	–	–	0.30	25.0	24.0
9-3-78	2100	2.6	0.03	–	24.5	24.5
9-5-78	5500	3.1	0.10	0.89	25.5	23.0
9-6-78	1300	4.3	0.00	0.84	25.5	22.5
9-7-78	1200	3.3	0.03	–	25.0	24.0
9-8-78	580	2.3	0.04	1.20	25.5	23.5
9-9-78	180	2.5	0.14	1.25	26.0	23.0
9-10-78	340	2.6	0.12	1.09	25.0	24.0
9-11-78	2400	2.2	0.00	–	25.0	24.0
9-12-78	1800	1.7	0.07	0.98	26.0	24.5
9-13-78	520	2.1	0.10	0.86	26.0	24.5
9-14-78	760	1.7	0.08	–	25.0	24.0
9-15-78	480	1.6	0.07	1.32	25.5	24.5
9-17-78	190	2.5	0.13	1.02	26.5	24.5
9-18-78	20	2.2	0.05	–	25.0	24.5
9-19-78	–	2.2	–	0.56	26.0	24.0
9-20-78	–	–	–	0.98	26.0	24.5
9-22-78	70	2.2	0.03	–	26.5	24.5
9-23-78	20	2.3	0.01	0.30	26.5	24.5
9-24-78	110	2.7	0.00	0.43	27.0	25.0
9-25-78	50	2.4	0.00	0.58	26.5	24.5
9-27-78	–	–	–	0.48	27.0	24.5
9-29-78	30	2.4	0.02	0.49	27.5	24.0
9-30-78	130	3.9	0.00	–	27.5	24.0
10-2-78	–	4.0	0.16	–	26.5	24.5
10-3-78	210	4.3	0.02	–	26.5	24.5
10-4-78	50	4.0	–	0.52	26.5	24.0
10-5-78	70	7.2	–	–	26.5	24.0

(continued)

TABLE S30. (continued)

Date	Standard Plate Counts/ml	Endotoxin (µg/ml)	Free Chlorine[1] (ppm)	Free Chlorine[2] (ppm)	Water temperature (°C)	Ambient laboratory temperature (°C)
10-6-78	50	3.9	0.26	0.65	26.5	23.5
10-7-78	30	-	-	-	26.0	23.5
10-9-78	200	3.7	0.00	0.13	25.5	24.0
10-11-78	260	2.7	0.00	0.29	25.0	24.0
10-13-78	200	4.5	0.00	0.29	27.0	24.0
10-14-78	130	2.5	0.00	-	25.5	22.5
10-15-78	1600	4.5	0.00	0.11	25.0	22.0
10-16-78	400	2.7	0.00	0.10	27.0	23.5
10-17-78	2100	1.6	0.00	0.12	25.0	26.0
10-18-78	4400	1.2	0.00	0.16	26.0	26.0
10-19-78	150	1.4	0.00	-	-	25.5
10-21-78	<10[d]	2.1	0.05	0.40	-	-
10-22-78	40	1.5	0.00	0.56	-	-
10-23-78	20	1.8	0.18	0.44	-	-
10-25-78	-	2.9	0.08	0.32	26.0	26.5
10-27-78	230	2.5	0.11	0.18	25.5	25.5
10-28-78	400	3.0	0.23	-	26.5	26.0
10-29-78	220	1.2	-	0.49	25.0	26.0
10-31-78	-	-	-	0.39	26.0	26.0
11-1-78	1200	2.0	0.21	0.34	27.0	26.0
11-3-78	-	-	-	0.27	24.5	25.5
11-6-78	3200	1.7	0.04	0.21	25.0	26.5
11-13-78	2000	2.7	0.17	-	25.0	23.5
11-23-78	22000	2.2	-	0.43	24.0	25.0
11-24-78	1300	1.4	-	-	24.0	23.5
11-25-78	940	2.3	0.07	0.65	-	-
11-26-78	1200	1.9	0.00	0.42	-	-
11-27-78	1100	2.0	0.00	0.55	-	-
11-29-78	680	1.5	0.22	-	-	-
11-30-78	35/20[c]	1.7/1.7[c]	-	-	-	-
12-1-78	480	2.2	0.15	0.62	-	-
12-2-78	10/10[c]	2.4/2.7[c]	0.04	0.21	-	-

(continued)

TABLE S30. (continued)

Date	Standard Plate Counts/ml	Endotoxin (µg/ml)	Free Chlorine[1] (ppm)	Free Chlorine[2] (ppm)	Water temperature (°C)	Ambient laboratory temperature (°C)
12-3-78	60[d]	1.9	0.20	0.42	23.0	29.0
12-4-78	<10[d]	2.1	0.00	0.43	23.0	24.5
12-5-78	60[d]	2.0	0.15	0.66	24.0	24.0
12-6-78	<10[d]	1.7	-	0.36	25.0	27.0
12-7-78	3600[a]	2.5[a]	0.00	0.54	22.5	27.5
12-8-78	200	2.9	0.00	0.62	22.5	27.0
12-9-78	50	2.8	0.00	0.59	21.5	20.0
12-10-78	110	2.5	0.05	0.45	20.5	20.0
12-11-78	100	2.8	0.06	0.44	21.0	-
12-12-78	10	2.3	0.00	0.17	25.0	25.5
12-13-78	1200[a]	1.9[a]	0.00	0.35	23.0	23.0
12-14-78	500	2.4	0.00	0.34	23.5	25.5
12-15-78	-	2.8	0.00	0.38	24.0	26.0
12-16-78	<10[d]	3.0	0.00	0.28	25.5	27.5
12-17-78	110/1800[b]	3.1/1.5[b]	0.00	-	24.5	26.5
12-18-78	9/<10[c,d]	2.7/2.8[c]	0.00	0.31	23.5	25.5
12-19-78	10	2.9	0.08	0.35	24.0	24.5
12-20-78	450	2.4	0.00	0.46	24.0	25.5
12-21-78	35/720[a]	1.5/1.5[a]	0.00	0.32	25.0	27.0
12-22-78	47	1.6	0.00	0.08	25.0	27.5
12-23-78	16	1.5	0.00	0.09	23.0	27.0
12-24-78	3000	1.5	0.02	-	23.0	26.5
12-25-78	8800	3.3	0.02	0.19	22.0	26.0
12-26-78	<10/3400[b]	2.0/1.2[b]	0.04	0.17	22.0	26.5
12-27-78	<100[d]	2.3	0.00	0.32	22.5	27.0
12-28-78	-	1.3	0.00	0.28	22.5	26.5
12-29-78	0	1.4	0.00	-	22.0	25.5
12-30-78	45	1.0	0.04	0.30	22.5	26.0
12-31-78	46/24[c]	1.4/0.9[c]	-	-	19.0	26.5
1-1-79	3000	2.5	0.00	0.36	18.5	26.0
1-2-79	25/<10[c,d]	1.0/-	0.00	0.34	21.0	27.0
1-3-79	<100[d]	0.4	0.00	0.11	23.0	26.0

(continued)

TABLE S30. (continued)

Date	Standard Plate Counts/ml	Endotoxin (µg/ml)	Free Chlorine[1] (ppm)	Free Chlorine[2] (ppm)	Water temperature (°C)	Ambient laboratory temperature (°C)
1-4-79	<100[d]	1.4	0.00	0.09	24.0	26.5
1-5-79	95/830[a]	1.2/0.9[a]	0.00	0.17	19.0	25.0
1-6-79	<10[d]	1.5	0.00	0.02	20.5	26.0
1-7-79	45	1.9	0.00	0.00	21.0	25.0
1-8-79	65/40[c]	1.9/-	0.00	0.04	21.0	21.5
1-9-79	<10[d]	2.0	0.00	0.09	20.0	20.0
1-10-79	35/2900[a]	1.3/1.8[a]	0.00	0.10	20.0	22.0
1-11-79	20/5[c]	1.1/-	0.00	0.44	20.0	22.0
1-12-79	25/400[a]/650[b]	1.3/1.6[a]/1.3[b]	0.00	0.32	20.0	21.0
1-13-79	100	4.0	0.04	0.27	21.5	21.0
1-14-79	115[d]	3.3	-	0.10	18.0	18.0
1-15-79	<100[d]	3.6	0.00	0.15	19.0	19.0
1-16-79	<100[d]	3.6	0.00	0.08	21.0	25.0
1-17-79	<100[d]/850[b]/≤10[c,d]	3.8/4.0[b]/2.5[c]	-	0.14	24.0	26.0
1-18-79	<100[d]	2.4	0.00	0.14	25.0	26.0
1-19-79	<10[d]	4.4	0.06	-	26.0	27.0
1-20-79	<10[d]	1.7	0.00	0.10	25.0	23.0
1-21-79	<10[d]/<10[c,d]	1.4/-	0.00	0.18	21.0	25.0
1-22-79	45/640[b]	0.9/2.4[b]	0.00	0.00	23.0	28.0
1-23-79	45/6[c]	2.0/2.6[c]	-	0.29	19.0	26.5
1-24-79	350/ 10[c]	2.3/-	0.00	0.11	20.5	27.0
1-25-79	75	1.3	0.00	0.28	19.0	25.0
1-26-79	250	1.9	0.00	0.24	19.5	24.5
1-27-79	9	1.6	0.00	0.10	21.0	25.0
1-28-79	110[a]	2.2[a]	0.06	0.21	21.0	25.0
1-29-79	100	<0.8	-	-	21.0	26.5
1-30-79	<10[d]/<10[a,d]	2.6/2.6[a]	0.04	-	21.0	26.5
1-31-79	10/65[c]	3.6/-	0.00	0.26	20.0	26.5
2-1-79	<100[d]	2.1	0.00	0.10	21.0	24.0
2-2-79	1200	6.2	0.00	0.09	21.0	25.0
2-3-79	-	-	-	0.08	21.5	24.0
2-4-79	<10[d]	1.1	0.07	0.30	22.0	25.0

(continued)

TABLE S30. (continued)

Date	Standard Plate Counts/ml	Endotoxin (μg/ml)	Free Chlorine[1] (ppm)	Free Chlorine[2] (ppm)	Water temperature (°C)	Ambient laboratory temperature (°C)
2-6-79	5/10[c]	1.3/-	0.00	0.23	18.0	25.0
2-7-79	<10/1400[b]	1.1/0.7[b]	0.00	0.22	17.5	24.5
2-8-79	10	1.1	0.09	-	18.5	24.0
2-9-79	1200[a]	0.6[a]	0.08	-	19.0	22.5
2-10-79	10[a]	2.0[a]	0.00	-	18.5	23.0
2-11-79	-	2.3	0.00	0.31	19.0	24.0
2-13-79	<10[d]	1.8	0.00	0.32	18.5	24.0
2-14-79	1200/15000[b]	1.6/1.6[b]	0.05	0.58	18.0	24.0
2-15-79	130/550[c]	1.3/1.3[c]	0.00	0.26	18.5	24.0
2-16-79	55	1.4	0.00	0.15	18.0	24.5

1 = measured after water has stagnated in plumbing overnight
2 = measured on afternoon running water samples
a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plant count/ml [see reference (17), section 907-8]

TABLE S31. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Instapure

TEST WATER: New Orleans municipal drinking water

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)[e]
1-1-2	8-10-78	4	-	220	0.3	0.2	
	8-11-78	46	-	33000[d]	1.8	3.9	
	8-15-78	122	9400[d]	16000[a]	9.0	5.2[a]	
	8-17-78	226	6600[d]	66000	5.5	9.2	
	8-22-78	270	10000	12000[b]	7.5	2.5[b]	
1-1-3	8-10-78	4	-	310	0.3	0.5	
	8-11-78	55	-	90000[d]	1.8	3.6	
	8-14-78	105	15000[d]	190000[a,d]	8.4	5.4[a]	
	8-17-78	251	6600[d]	6100	5.5	14.1	
	8-23-78	251	24000	7000[b]	4.4	2.5[b]	

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]
e = not determined since this unit does not incorporate silver as a bacteriostat

TABLE S32. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Instapure

TEST WATER: New Orleans municipal drinking water (spiked)

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)[e]
1-1-4	12-31-78	8	24[c]	5[c]	0.9	0.4	
	1-1-79	36	3000	860	2.5	1.1	
	1-2-79	85	25[d]	<100	1.0	0.9	
	1-3-79	125	<100[a]	430	0.4	1.1	
	1-5-79	125	830[d]	16000[a]	0.9[a]	1.6[a]	
	1-6-79	181	<10[d]	55	1.5	2.9	
	1-7-79	227	45	6700	1.9	2.8	
	1-12-79	227	650[b]	200[b]	1.3[b]	2.9	
1-1-5	1-23-79	3	6[c]	110[c]	2.6[c]	-	
	1-24-79	19	350	3300	2.3	1.5	
	1-25-79	51	75	130	1.3	<1.3	
	1-26-79	80	250	4500	1.9	<1.3	
	1-27-79	113	9	<100	1.6	3.8	
	1-28-79	141	-	2500	1.4	3.6	
	1-30-79	141	<10[a,d]	<100[a]	2.6[a]	4.2[a]	
	1-31-79	151	10	16000	3.6	2.6	
	1-31-79	180	65[c]	1400[c]	-	-	
	2-1-79	200	<100[d]	150	2.1	1.8	
	2-7-79	200	1400[b]	30000[b]	0.7[b]	1.9	
1-1-6	1-23-79	3	6[c]	35[c]	2.6	4.3	
	1-24-79	32	350	25000	2.3	<1.3	
	1-25-79	37	75	3900	1.3	3.6	
	1-26-79	124	250	650	1.9	2.0	
	1-28-79	124	110[a]	13000[a]	1.4[a]	2.2[a]	
	1-29-79	173	100	450	0.8	2.1	
	1-30-79	225	<10[d]	<100	2.6	1.0	
	1-31-79	235	65[c]	800[c]	-	-	
	2-1-79	263	<100[d]	10000	2.1	3.0	
	2-7-79	263	1400[b]	110000[b]	0.7	1.8	

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]
e = not determined since this unit does not incorporate silver as a bacteriostat

TABLE S33. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Mini Aqua

TEST WATER: New Orleans municipal drinking water

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)[e]
1-2-2	8-10-78	2	-	250	0.3	0.7	
	8-11-78	34	-	16000	1.8	2.8	
	8-15-78	113	9400[d]	12000[a]	9.0	8.3[a]	
	8-17-78	211	6600	120000	5.5	7.0	
	8-23-78	211	24000	15000[b]	4.4	2.5[b]	
1-2-3	8-10-78	2	-	160	0.3	0.2	
	8-11-78	35	-	48000[d]	1.8	3.9	
	8-15-78	97	9400[d]	8800[a,d]	9.0	3.7[a]	
	8-17-78	213	6600	23000	5.5	3.2	
	8-23-78	226	24000	20000[b]	4.4	4.0[b]	

a = 2-day stagnation sample

b = 5-day stagnation sample

d = estimated standard plate count/ml [see reference (17), section 907-8]

e = not determined since this unit does not incorporate silver as a bacteriostat

TABLE S34. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Sears

TEST WATER: New Orleans municipal drinking water

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)[e]
1-3-2	8-23-78	10	24000[d]	100	4.4	2.0	
	8-29-78	870	39000[d]	800	4.3	7.0	
	9-3-78	1882	2100	<100[d]	2.6	4.2	
	9-5-78	1882	5500	800[a]	3.1	3.3[a]	
	9-9-78	2637	180	<10[d]	2.5	5.0	
	9-11-78	3049	2400	20000	2.2	5.2	
	9-13-79	3400	520	4500[b]	2.1	6.5[b]	
	9-18-78	3485	20	1300[b]	2.2	8.2[b]	
1-3-3	8-7-78	10	8000	200	0.9	-	
	8-12-78	886	2000[d]	2500[d]	5.5	3.9	
	8-13-78	1069	4700[d]	87000[d]	4.3	9.2	
	8-18-78	1740	6900[d]	320000[d,a]	6.8	18[a]	
	8-22-79	2490	10000	2500	7.5	6.5	
	8-28-78	3333	5000	600[b]	3.8	10.5[b]	
	9-3-78	3402	2100	3500[b]	2.6	2.4[b]	

a = 2-day stagnation sample
b = 5-day stagnation sample
d = estimated standard plate count/ml [see reference (17), section 907-8]
e = not determined since this unit does not incorporate silver as a bacteriostat

TABLE S35. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Sears

TEST WATER: New Orleans municipal drinking water (spiked)

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)[e]
1-3-4	12-2-78	8	10	<100[d]	2.6	2.5	
	12-5-78	1619	60	900	2.0	3.9	
	12-7-78	1619	3600[a]	100[a]	2.5[a]	5.0[a]	
	12-11-79	3695	100	1500	2.8	5.6	
	12-12-78	4188	10	100	2.3	4.8	
	12-17-78	4188	1800[b]	2800[b]	1.5[b]	3.2[b]	
1-3-5	12-2-78	8	10	200	2.6	1.1	
	12-6-78	824	<10[d]	100	1.7	4.3	
	12-11-78	1894	100	600	2.8	6.3	
	12-13-78	1894	1200[a]	400[a]	1.9[a]	6.4[a]	
	12-16-78	2540	<10[d]	<10[d]	3.0	4.9	
	12-20-78	3427	450	40	2.4	4.8	
	12-26-78	3657	3400[b]	1700[b]	1.2[b]	3.2[b]	
1-3-6	12-24-78	8	3000	4200	1.5	2.6	
	12-29-78	795	0	1400	1.4	4.6	
	1-3-79	1732	<100[d]	2600	1.4	1.0	
	1-5-79	1732	830[a]	200[a]	0.9[a]	1.1[a]	
	1-10-79	2616	35	13000	1.3	2.8	
	1-11-79	2786	20[c]	900[c]	1.1	1.5[c]	
	1-15-79	3459	<100[d]	550	3.6	6.9	
	1-17-79	3817	<100[d]	2700	3.8	6.8	
	1-22-79	3831	640[b]	4400[b]	2.4[b]	1.6[b]	

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]
e = not determined since this unit does not incorporate silver as a bacteriostat

TABLE S36. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: H_2OK

TEST WATER: New Orleans municipal drinking water

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)
1-4-2	8-9-78	4	-	400	0.5	-	-
	8-20-78	208	22000	4800	3.0	7.3	4
	9-3-78	496	2100	100	2.6	3.9	7
	10-4-78	1169	50	<100[a,d]	4.0	1.6[a]	-
	10-9-78	1277	200	100	3.7	4.8	6
	10-21-78	1535	<10[d]	400	2.1	3.9	6
	11-6-78	2000	3200	4800	1.7	1.7	6
	11-13-78	2000	2000	5000[b]	2.7	7.0[b]	4
1-4-3	8-9-78	4	-	0	0.5	-	9
	8-20-78	226	22000	4800	3.0	4.5	7
	9-3-78	508	2100	<100[d]	2.6	4.4	11
	10-4-78	1128	50	100[a]	4.0	2.0[a]	-
	10-9-78	1395	200	10	3.7	4.7	4
	10-21-78	1500	<10[d]	900	2.1	3.4	7
	11-6-78	2000	3200	3000	1.7	1.6	6
	11-13-78	2000	2000	5500[b]	2.7	5.0[b]	5

a = 2-day stagnation sample
b = 5-day stagnation sample
d = estimated standard plate count/ml [see reference (17), section 907-8]

TABLE S37. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: H_2 OK

TEST WATER: New Orleans municipal drinking water (spiked)

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)
1-4-4	11-23-78	4	22000	240000	2.2	1.5	6
	11-30-78	379	35	400	1.7	2.8	2
	12-4-78	567	<10[d]	<100[d]	2.1	2.3	7
	12-11-78	923	100	1200	2.8	4.9	2
	12-13-78	923	1200[a]	200[a]	1.9[a]	6.3[a]	2
	1-2-79	1748	<10[c,d]	100[c]	-	-	-
	1-12-79	2136	25	<100[d]	1.3	3.0	3
	1-17-79	2136	850[b]	700[b]	4.0[b]	5.9[b]	<1
1-4-5	11-23-78	4	22000	12000	2.2	2.0	5
	12-9-78	241	50	400	2.8	4.1	3
	12-26-78	489	<10[d]	<100[d]	2.0	3.7	-
	2-7-79	1038	<10[d]	500	1.1	3.8	6
	2-10-79	1038	10[a]	<100[a,d]	2.0[a]	5.2[a]	<1
	2-15-79	1115	130	500	1.3	3.7	4
	2-15-79	1117	550[c]	500[c]	1.3[c]	4.4[c]	-
	2-16-79	1125	55	150	1.4	0.9	5
	2-23-79	1125	-	2900[b]	-	1.7[b]	8
	TERMINATED EARLY DUE TO FILTER PLUGGING						
1-4-6	11-23-78	4	22000	9200	2.2	3.1	4
	12-9-78	252	50	100	2.8	4.8	2
	12-26-78	497	<10[d]	<100[d]	2.0	4.0	-
	2-7-79	1044	<10[d]	400	1.1	3.1	-
	2-10-79	1047	10[a]	41000[a]	2.0	4.4	<1
	2-15-79	1126	130	<100[d]	1.3	5.9	6
	2-15-79	1129	550[c]	250[c]	1.3[c]	3.7[c]	-
	2-16-79	1135	55	240	1.4	1.3	4
	2-23-79	1135	-	7000[b]	-	4.1[b]	4
	TERMINATED EARLY DUE TO FILTER PLUGGING						

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]

TABLE S38. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: System 1

TEST WATER: New Orleans municipal drinking water

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)
1-5-2	8-7-78	17	8000	200	0.9	-	9
	8-13-78	659	4700[d]	650	4.3	4.0	9
	8-19-78	1203	7000	7200[a]	4.3	3.9[a]	10
	8-25-78	1891	11000	4200	2.0	3.3	9
	9-3-78	2700	2100	<100[d]	2.6	0.8	14
	9-9-78	2760	180	30[b]	2.5	2.9[b]	8
1-5-3	8-7-78	17	8000	500	0.9	0.6	2
	8-13-78	572	4700[d]	20000	4.3	5.9	<1
	8-22-78	1286	10000	2000[a]	7.5	5.0[a]	2
	8-29-78	1821	39000[d]	7700	4.3	4.2	<1
	9-5-78	2521	5500	500	3.1	3.5	<1
	9-11-78	2560	2400	5200[b]	2.2	6.5[b]	1

a = 2-day stagnation sample

b = 5-day stagnation sample

d = estimated standard plate count/ml [see reference (17), section 907-8]

TABLE S39. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: System 1

TEST WATER: New Orleans municipal drinking water (spiked)

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)
1-5-4	11-30-78	27	20[c]	<100[c,d]	1.7[c]	4.3[c]	3
	12-1-78	197	480	40	2.2	3.5	2
	12-5-78	1289	60	15000	2.0	5.3	-
	12-7-78	1289	3600[a]	300[a]	2.5[a]	4.5[a]	-
	12-11-78	2494	100	<100[d]	2.8	5.8	1
	12-12-78	2770	10	<100[d]	2.3	6.3	-
	12-17-78	2770	1800[b]	250[b]	1.5[b]	2.8[b]	-
1-5-5	11-30-78	29	20[c]	1000[c]	1.7[c]	3.3[c]	2
	12-8-78	637	200	800	2.9	3.9	2
	12-19-78	1343	10	<100[d]	2.9	3.5	5
	12-21-78	1345	720[a]	630[a]	1.5[a]	4.7[a]	2
	12-29-78	1815	0	<100[d]	1.4	3.1	2
	1-2-79	2046	<10[c,d]	<100[c,d]	-	-	-
	1-12-79	2689	25	950	1.3	4.6	4
	1-17-79	2691	850[b]	<100[b,d]	4.0[b]	6.8[b]	2
1-5-6	12-18-78	9	<10[c,d]	<100[c,d]	2.8[c]	2.5[c]	1
	12-30-78	646	45	1600	1.0	1.1	-
	1-10-79	1235	35	150	1.3	2.8	-
	1-12-79	1236	400[a]	200[a]	1.6[a]	3.0[a]	<1
	1-24-79	1863	350	400	2.3	1.3	-
	1-24-79	1882	<10[c,d]	<100[c,d]	-	2.6[c]	-
	2-6-79	2500	5	2600	1.3	3.1	-
	2-8-79	2611	10	<100[d]	1.1	5.8	<1
	1-14-79	2613	15000[b]	12000[b]	1.6[b]	5.9	1

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]

TABLE S40. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Aqualux

TEST WATER: New Orleans municipal drinking water

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)
1-6-2	8-9-78	20	-	46	0.5	-	13
	8-17-78	557	6600	6100	5.5	1.8	6
	8-27-78	1034	900	40000[a]	2.0	5.5[a]	-
	9-5-78	1550	5500	7500	3.1	2.8	6
	9-12-78	2143	1800	6500	1.7	5.0	7
	9-17-78	2180	190	42000[b]	2.5	7.0[b]	1
1-6-3	8-9-78	20	-	18	0.5	-	10
	8-10-78	51	-	130	0.3	-	-
	8-17-78	647	6600	11000	5.5	3.4	9
	8-25-78	1005	11000	11000[a]	2.0	3.5[a]	8
	9-3-79	1691	2100	6500	2.6	5.3	13
	9-8-79	2051	580	6300	2.3	5.7	9
	9-14-78	2075	760	6000[b]	1.7	6.3[b]	6

a = 2-day stagnation sample

b = 5-day stagnation sample

TABLE S41. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Aqualux

TEST WATER: New Orleans municipal drinking water (spiked)

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)
1-6-4	11-30-78	15	20[c]	600[c]	1.7[c]	3.3[c]	2
	12-5-78	1040	60	100	2.0	4.3	-
	12-7-78	1040	3600[a]	33000[a]	2.5[a]	5.0[a]	-
	12-11-78	2063	100	300	2.8	3.9	<1
	12-12-78	2296	10	<100[d]	2.3	5.2	-
	12-17-78	2296	1800[b]	82000[b]	1.5[b]	8.7[b]	-
1-6-5	11-30-78	15	20[c]	<100[c,d]	1.7[c]	2.8[c]	2
	12-4-78	200	<10[d]	200	2.1	5.5	2
	12-11-78	560	100	800	2.8	4.0	1
	12-19-78	936	10	100	2.9	6.5	2
	12-21-78	937	720[a]	490[a]	1.5[a]	4.8[a]	-
	1-2-79	1471	25	600	1.0	1.2	<1
	1-2-79	1487	<10[c,d]	950[c]	-	-	-
	1-13-79	2024	100	600	4.0	4.9	1
	1-17-79	2263	<100[d]	650	3.6	4.9	1
	1-22-79	2267	640[b]	38000[b]	2.4[b]	2.4[b]	2
1-6-6	12-18-78	9	<10[c,d]	<100[c,d]	2.8[c]	8.8[c]	2
	12-28-78	490	-	2600	1.3	2.6	-
	1-8-79	1031	65	4000	1.9	4.0	<1
	1-10-79	1042	2900[a]	2500[a]	1.8[a]	3.8[a]	1
	1-21-79	1537	<10[d]	1700	1.4	1.4	<1
	1-21-79	1546	<10[c,d]	<10[c,d]	-	-	-
	2-1-79	2004	<100[d]	2400	2.1	2.5	1
	2-7-79	2004	1400[b]	120000[b]	0.7[b]	3.3[b]	2

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]

TABLE S42. STANDARD PLATE COUNT, ENDOTOXIN, AND SILVER DATA

FILTER: Everpure

TEST WATER: New Orleans municipal drinking water (spiked)

Test run number	Test date	Gallons processed	Influent SPC/ml	Effluent SPC/ml	Influent endotoxin (ng/ml)	Effluent endotoxin (ng/ml)	Effluent silver (ppb)[e]
1-7-1	12-2-78	9	10[c]	100[c]	2.7[c]	1.8[c]	
	12-5-78	490	60	700	2.0	3.7	
	12-7-78	490	3600[a]	5100[a]	2.5[a]	3.8[a]	
	12-11-78	1261	100	1400	2.8	6.4	
	12-12-78	1442	10	19000	2.3	5.0	
	12-17-78	1442	1800[b]	14000[b]	1.5[b]	3.1[b]	
1-7-2	12-18-78	9	<10[c,d]	<100[c,d]	2.8[c]	3.1[c]	
	12-23-78	240	16	140	1.5	1.5	
	1-3-79	719	<100[d]	1800	0.4	1.4	
	1-5-79	719	830[a]	2900[a]	0.9[a]	1.1[a]	
	1-8-79	852	40[c]	200[c]	-	-	
	1-9-79	886	<10[d]	650	2.0	3.1	
	1-11-79	1010	5[c]	1000	-	-	
	1-12-79	1045	25	450	1.3	3.3	
	1-17-79	1045	850[b]	16000[b]	4.0[b]	5.9[b]	
1-7-3	1-17-79	9	<10[c,d]	400[c]	2.5[c]	5.2[c]	
	1-22-79	245	45	4700	0.9	2.0	
	1-28-79	558	-	2700	-	3.3	
	1-30-79	569	<10[a,d]	100[a]	2.6[a]	2.8[a]	
	2-4-79	809	<10[d]	7900	1.1	1.9	
	2-6-79	951	10[c]	100[c]	-	-	
	2-8-79	1022	10	1900	1.1	6.6	
	2-14-79	1022	15000[b]	130000[b]	1.6[b]	5.0[b]	

a = 2-day stagnation sample
b = 5-day stagnation sample
c = running water bacterial sample
d = estimated standard plate count/ml [see reference (17), section 907-8]
e = not determined since this unit does not incorporate silver as a bacteriostat

TABLE S43. BACTERIAL AND ENDOTOXIN EVALUATION OF NEW AND USED CARBON SAMPLES FROM TEST MODELS

Test Model	Test Run Number	Unused Carbon		Used Carbon			
				Inlet Side		Outlet Side	
		SPC/g	Endotoxin (ng/g)	SPC/g	Endotoxin (ng/g)	SPC/g	Endotoxin (ng/g)
Instapure	1-1-2	<100	<0.1	80000	-	200	-
	1-1-3			25000	-	8000	-
	1-1-5			<1000	<50	<1000	<50
	1-1-6			<1000	<50	800	<50
Mini Aqua	1-2-2	400	<0.1	1000	-	15000	-
	1-2-3			1700	-	1400	-
Sears	1-3-2	-	-	-	130	-	140
	1-3-3			1000	50	<1000	30
	1-3-5			4200	54	900	50
	1-3-6			1600	10	900	50
H_2OK	1-4-2	<100	<0.1	1000	50	30000	90
	1-4-3			1000	<50	10000	50
	1-4-4			600	40	400	44
	1-4-5			<1000	50	400	50
	1-4-6			500	50	1900	50
System 1	1-5-2	500	<0.1	1000	90	2000	60
	1-5-3			4000	60	2000	60
	1-5-5			1100	46	1000	42
	1-5-6			100	<50	<1000	<50
Aqualux	1-6-2	<100	<0.1	500	60	200	<50
	1-6-3			1100	150	5400	160
	1-6-5			12000	<10	900	<10
	1-6-6			500	<50	100	<50

(continued)

TABLE S43. (continued)

Test Model	Test Run Number	Unused Carbon		Used Carbon			
				Inlet Side		Outlet Side	
		SPC/g	Endotoxin (ng/g)	SPC/g	Endotoxin (ng/g)	SPC/g	Endotoxin (ng/g)
Everpure*	1-7-2	<100	1.2	1700	-	1800	28
				20000	50		
	1-7-3			16000	50	600	50
				73000	<50		

*Values given are for Cartridge #1 and Cartridge #2. Only one sample was collected and analyzed for Cartridge #2 because there was no clear demarcation of influent and effluent areas in this cartridge.

TABLE S44. COLIFORM ASSAY ON INFLUENT TEST WATER

Date	Coliform (colonies/100 ml)
8/17/78	0
8/23/78	0
8/28/78	0
9/5/78	0
9/8/78	0
9/9/78	0
9/11/78	0
9/14/78	0
11/13/78	0
1/2/79	0
1/17/79	0
1/22/79	0
2/1/79	0
2/7/79	0
2/8/79	0

TABLE S45. COLIFORM ASSAY RESULTS FROM CARBON FILTER EFFLUENTS PRIOR TO AND AFTER FINAL STAGNATION PERIODS

Study Model	Run Number	Coliform Colonies/100 ml	
		Before Stagnation	After Stagnation
Instapure	1-1-2	0	0
	1-1-3	0	0
	1-1-4	0	0
	1-1-5	0	0
	1-1-6	0	0
Mini Aqua	1-2-2	0	0
	1-2-3	0	0
Sears	1-3-2	0	9*
	1-3-3	0	0
	1-3-5	0	0
	1-3-6	0	0
H_2OK	1-4-2	0	0
	1-4-3	0	0
	1-4-4	0	0
	1-4-5	0	0
	1-4-6	0	0
System 1	1-5-2	0	0
	1-5-3	0	0
	1-5-5	0	0
	1-5-6	0	0
Aqualux	1-6-2	0	0
	1-6-3	0	0
	1-6-5	0	0
	1-6-6	0	0
Everpure	1-7-2	0	0
	1-7-3	0	0

*This positive coliform result may be the result of contamination since in no other instances were any positive results encountered in any influent or effluent water samples.

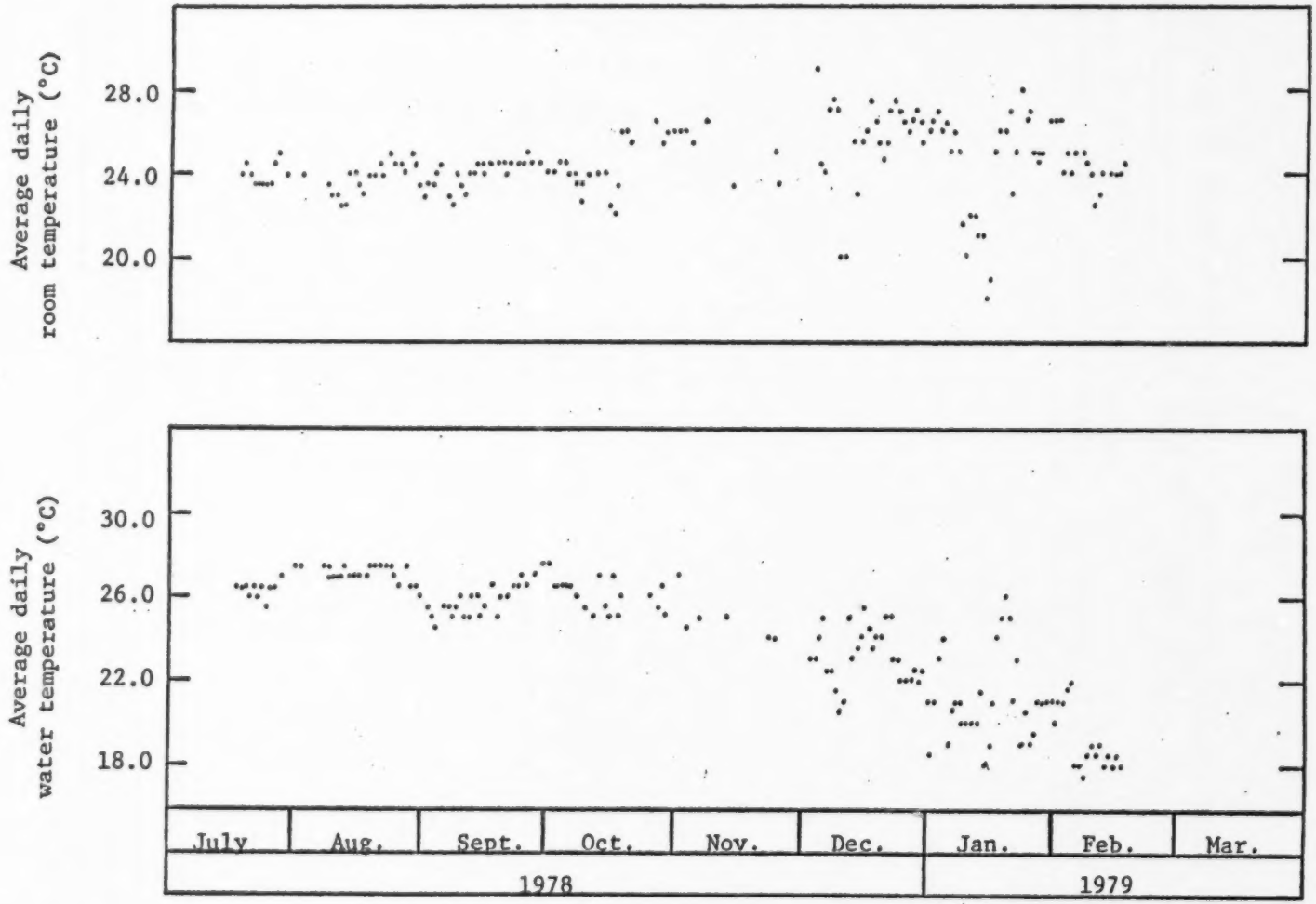

Figure S1. Room and water temperatures.

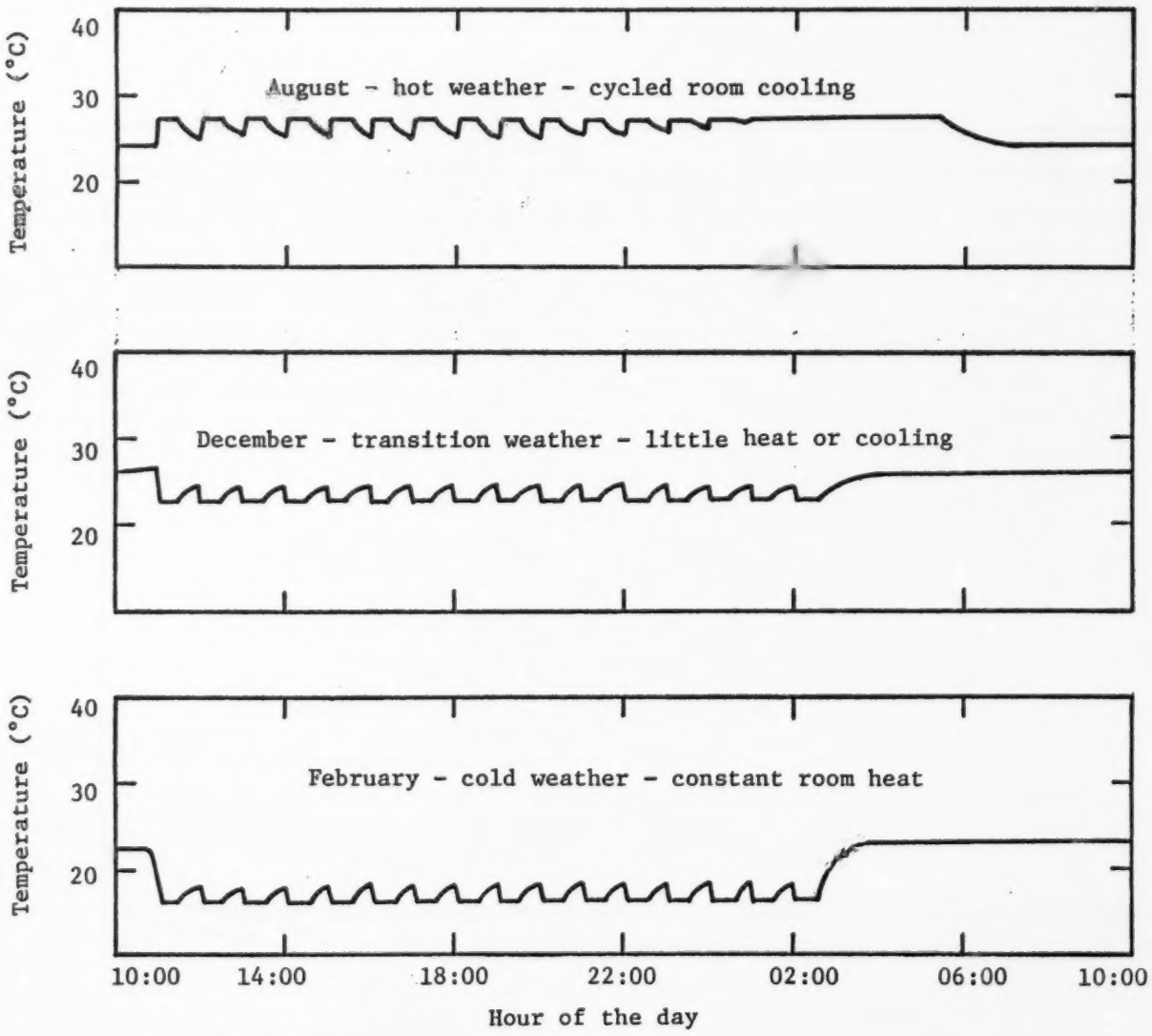

Figure S2. Typical 24 hour temperature exposure patterns.

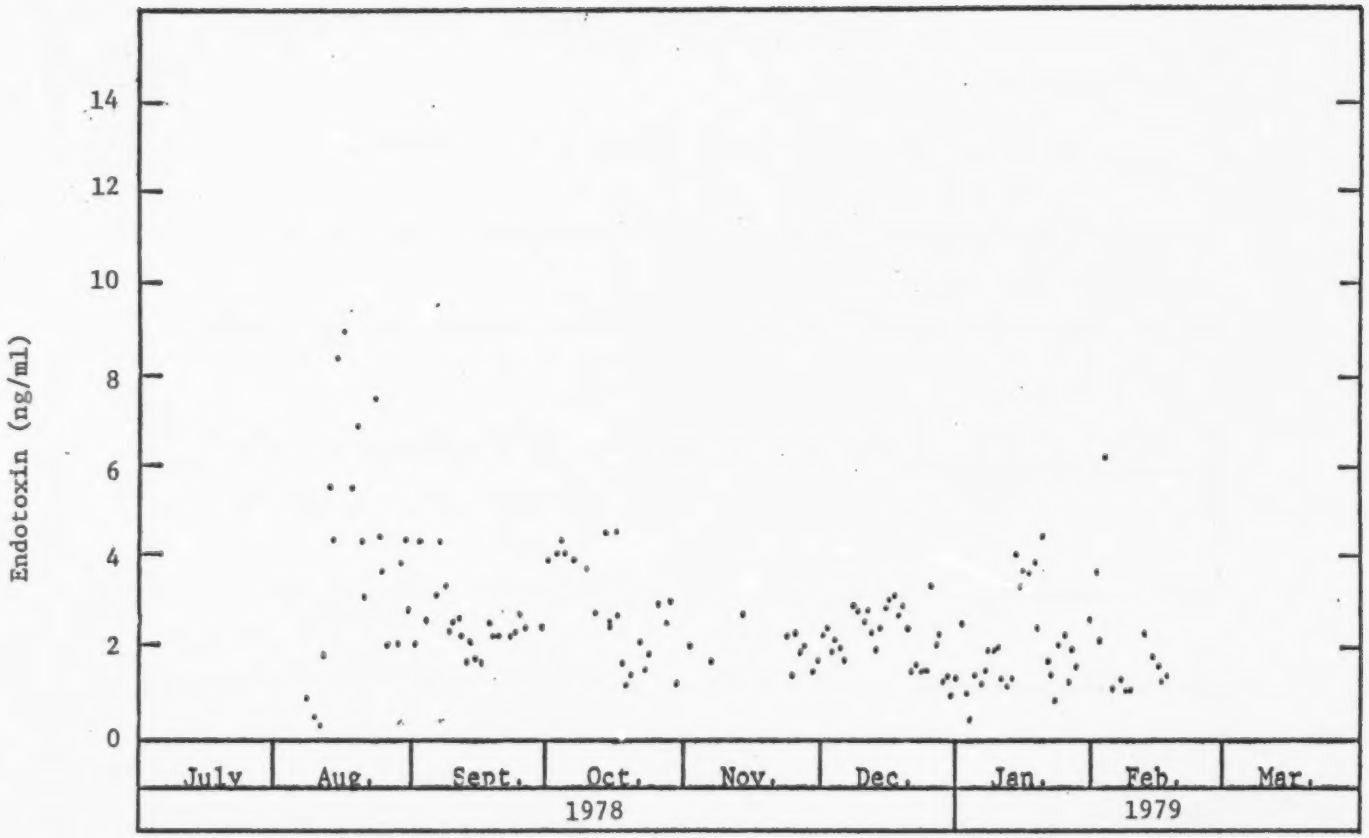

Figure S3. Influent endotoxin levels.

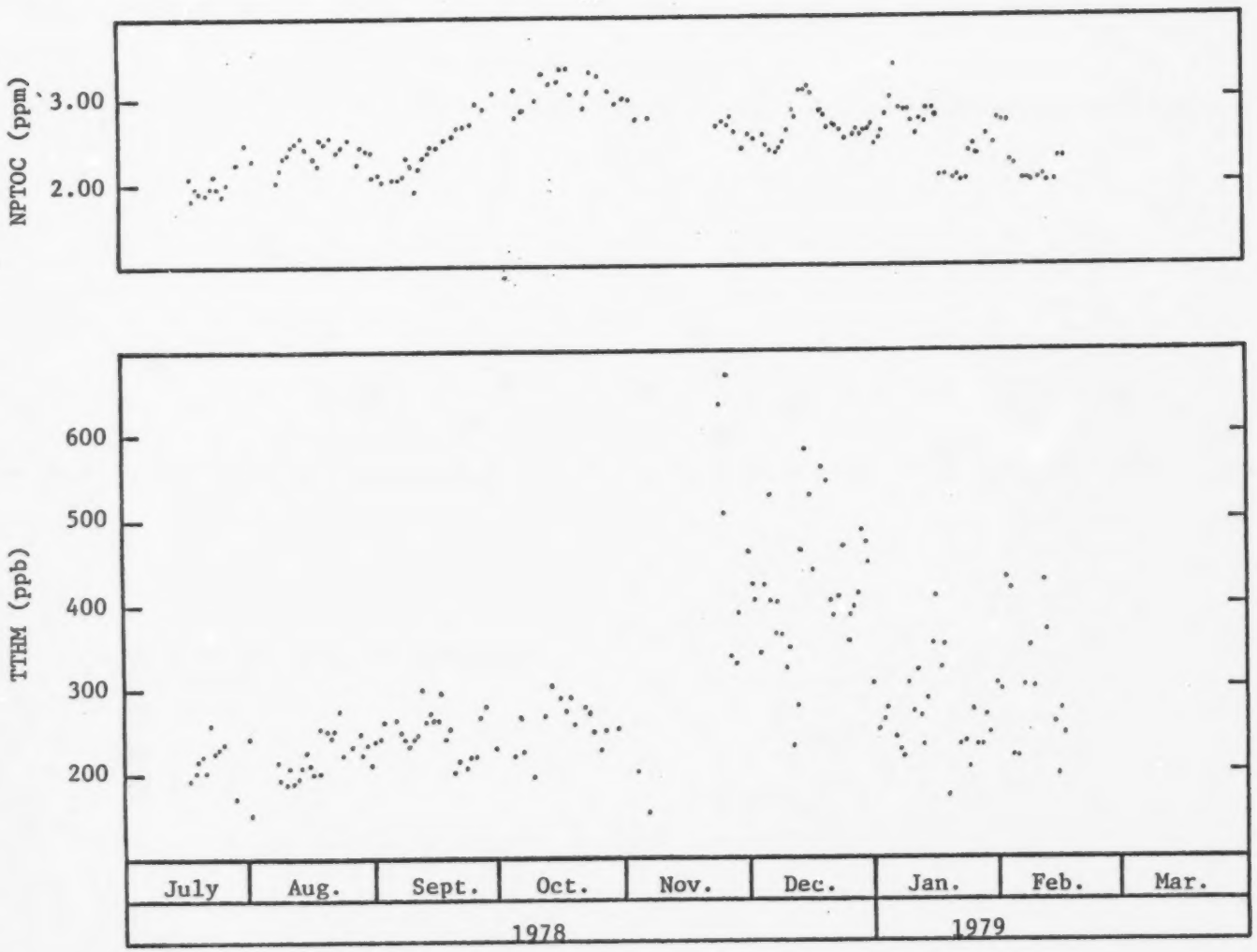

Figure S4. Influent TTHM and NPTOC concentrations.

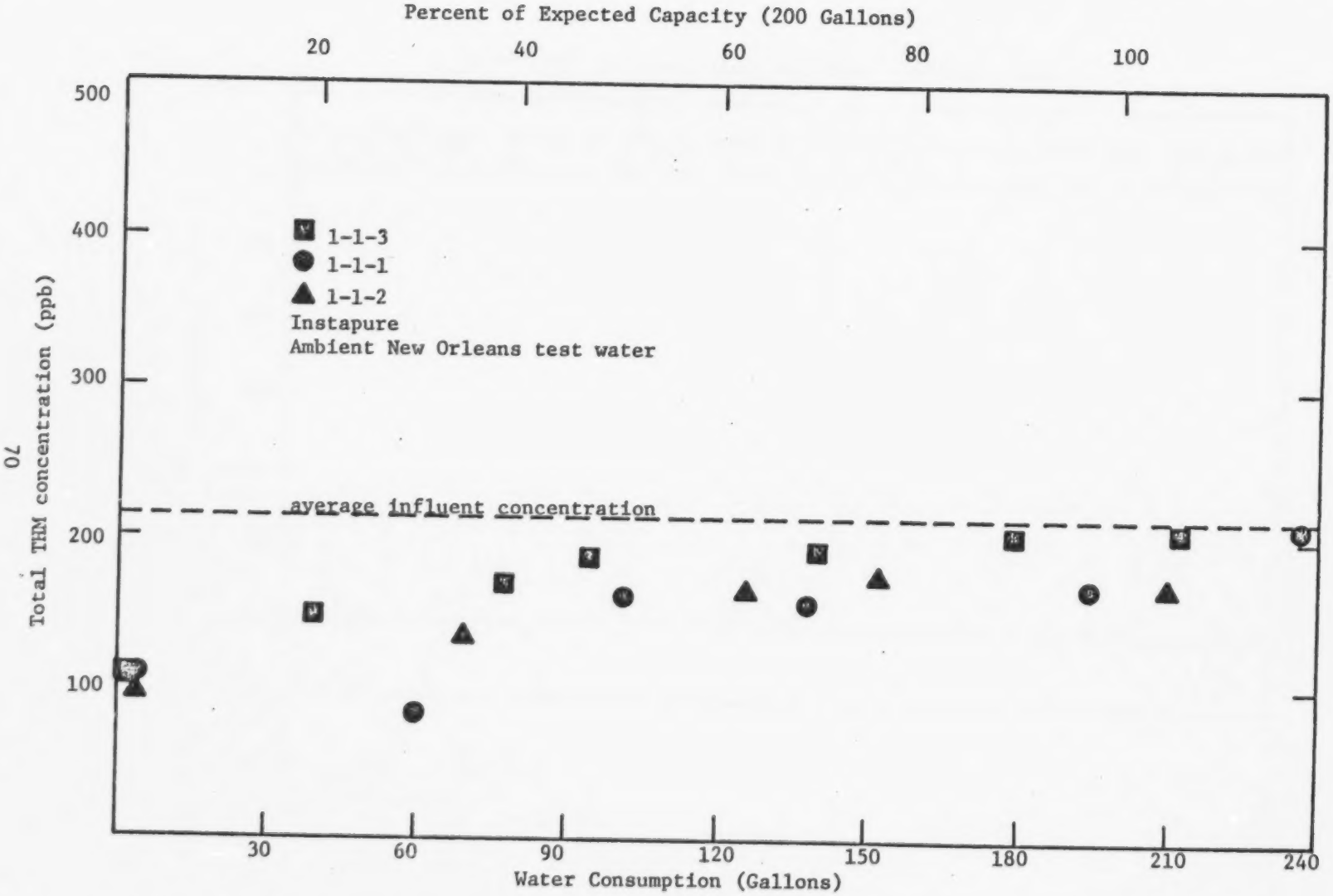

Figure S5. Influent and effluent total trihalomethane concentration versus water consumption.

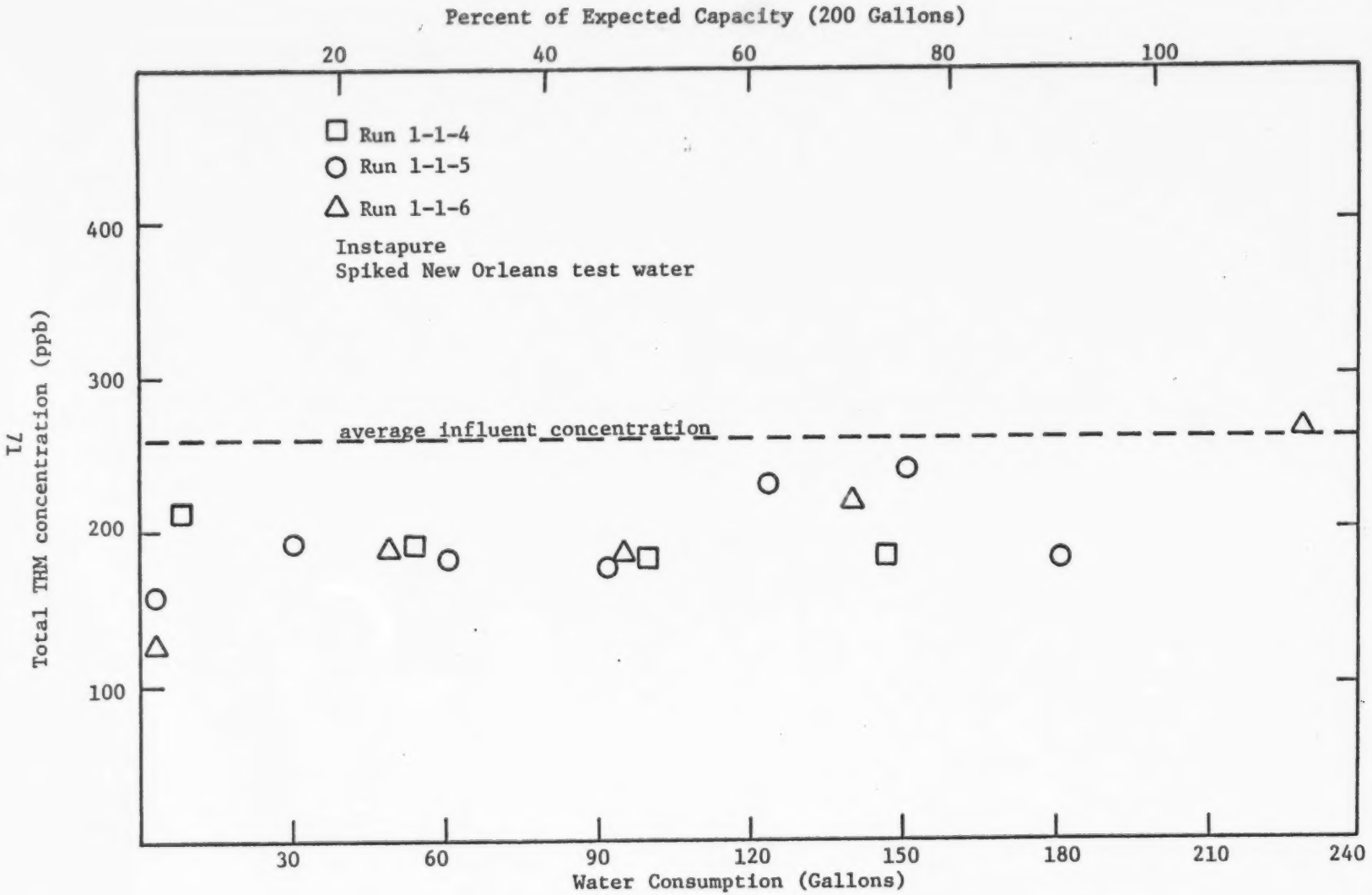

Figure S6. Influent and effluent total trihalomethane concentration versus water consumption.

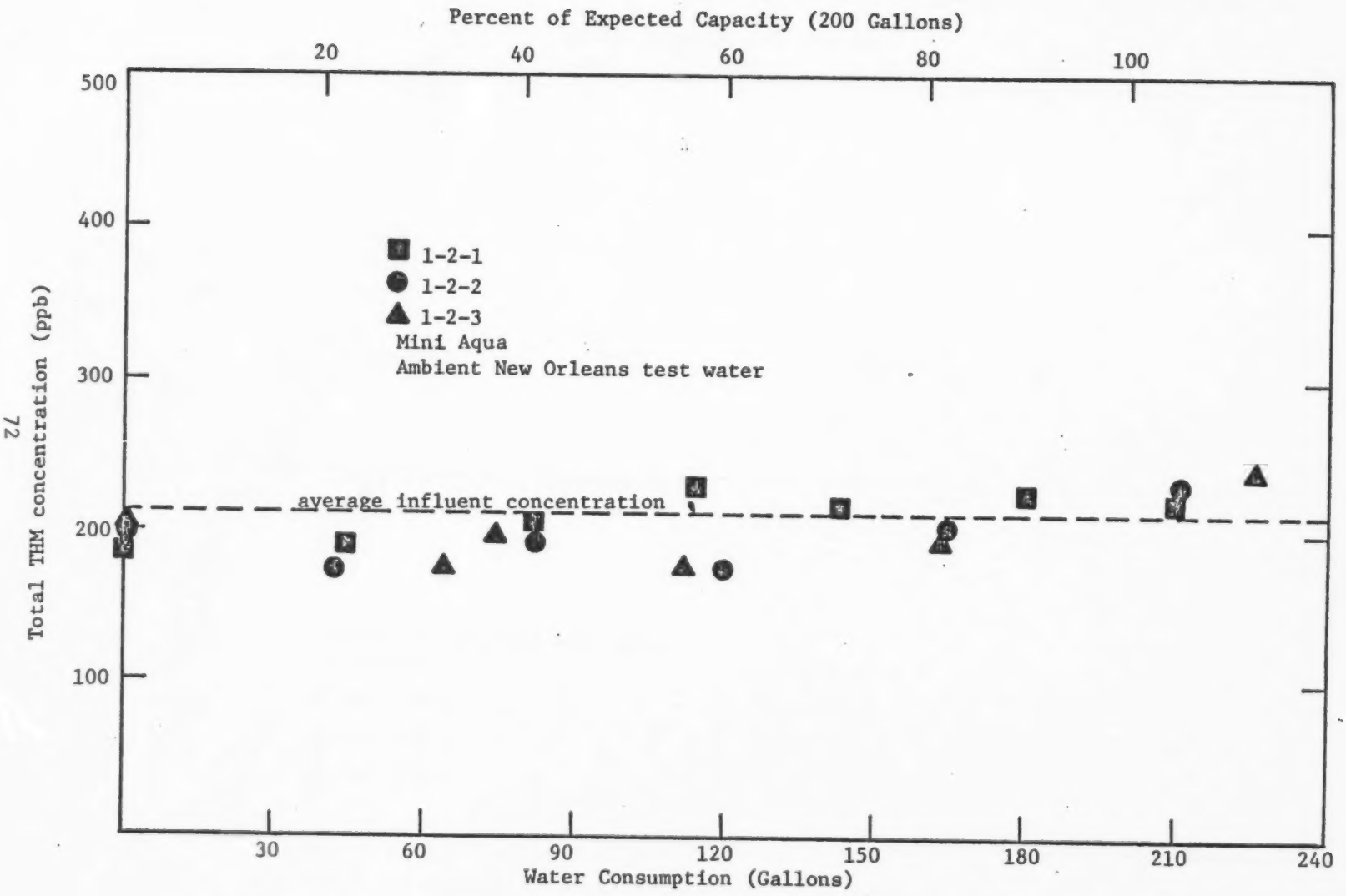

Figure S7. Influent and effluent total trihalomethane concentration versus water consumption.

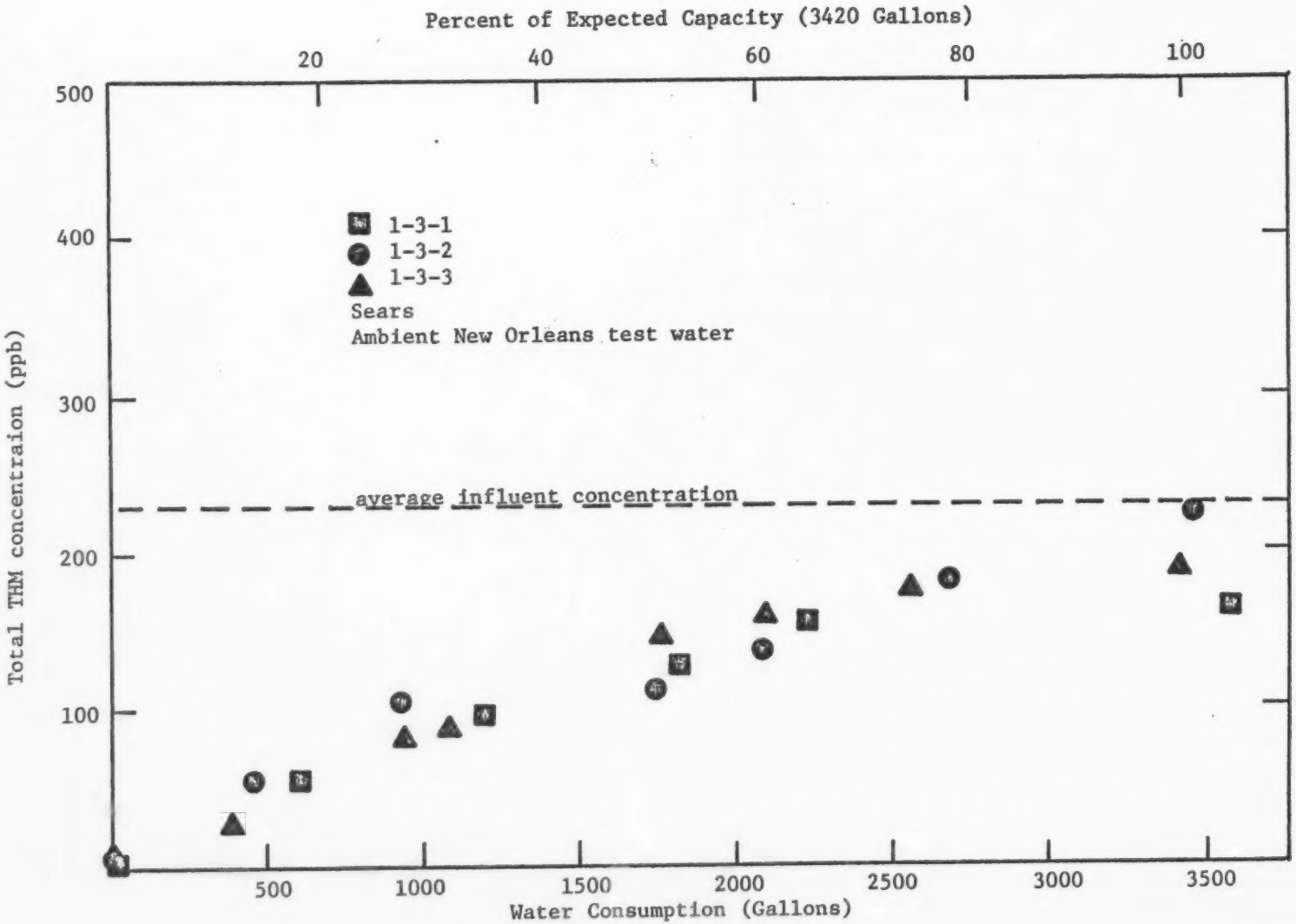

Figure S8. Influent and effluent totoal trihalomethane concentration versus water consumption.

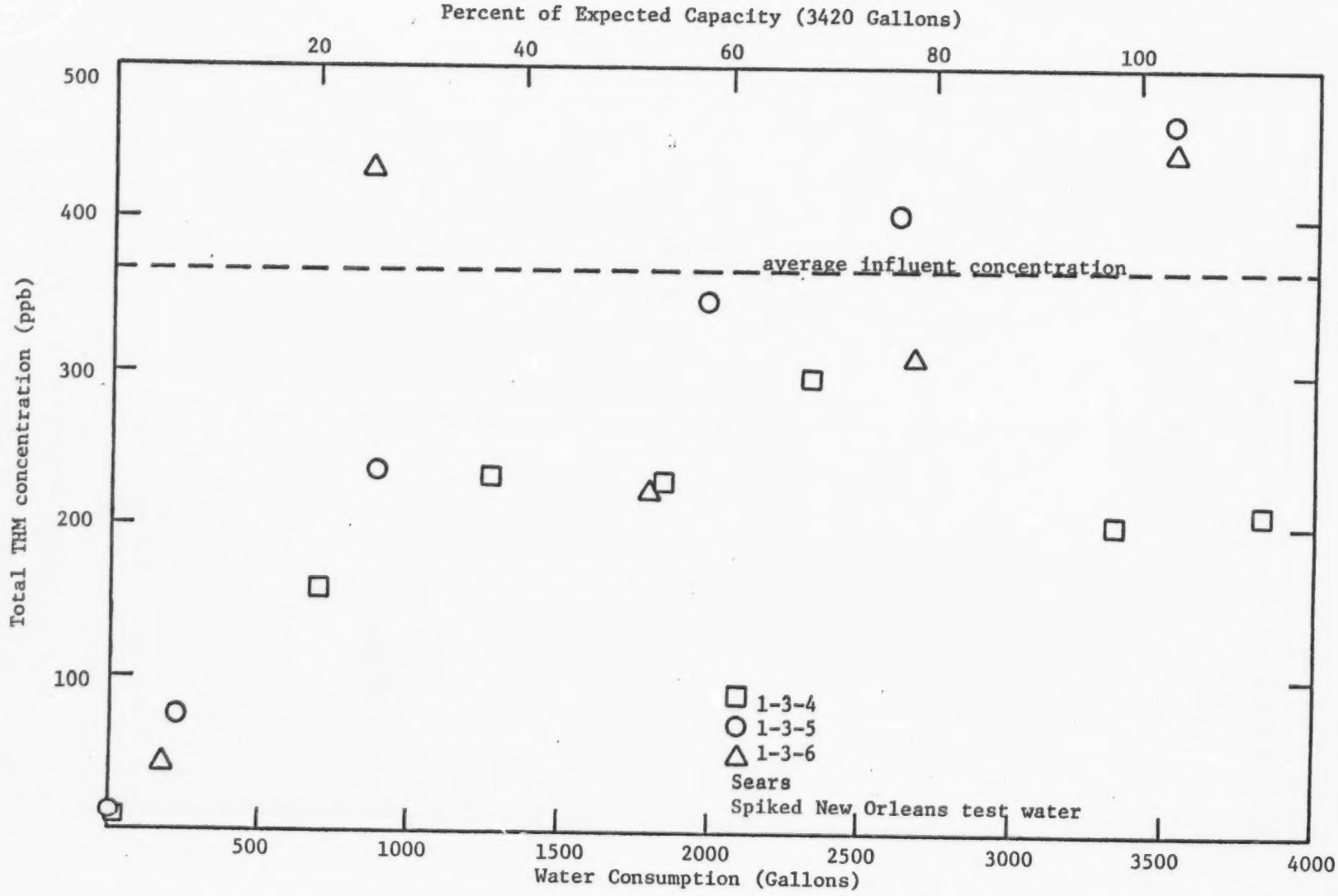

Figure S9. Influent and effluent total trihalomethane concentration versus water consumption.

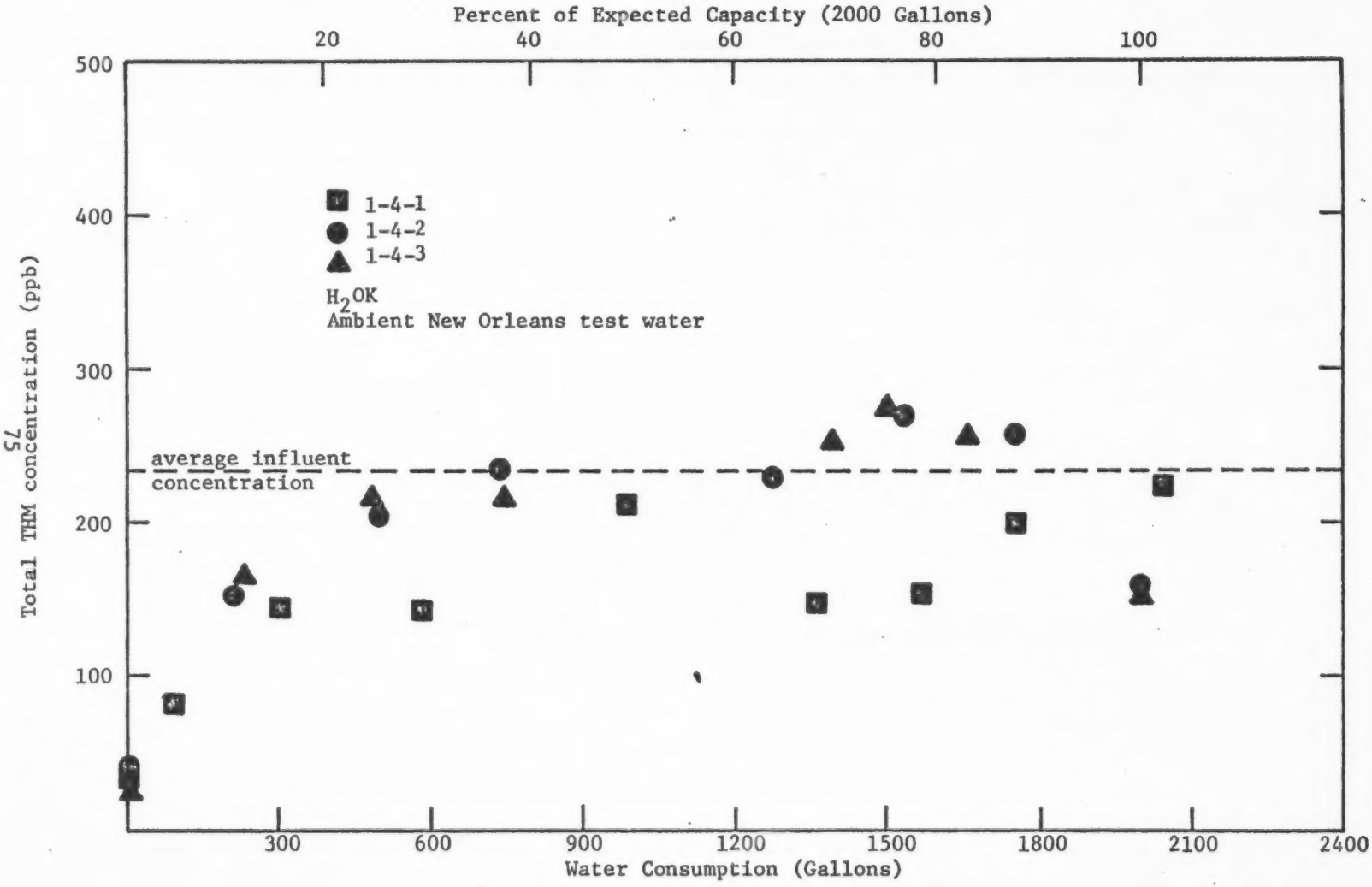

Figure S10. Influent and effluent total trihalomethane concentration versus water consumption.

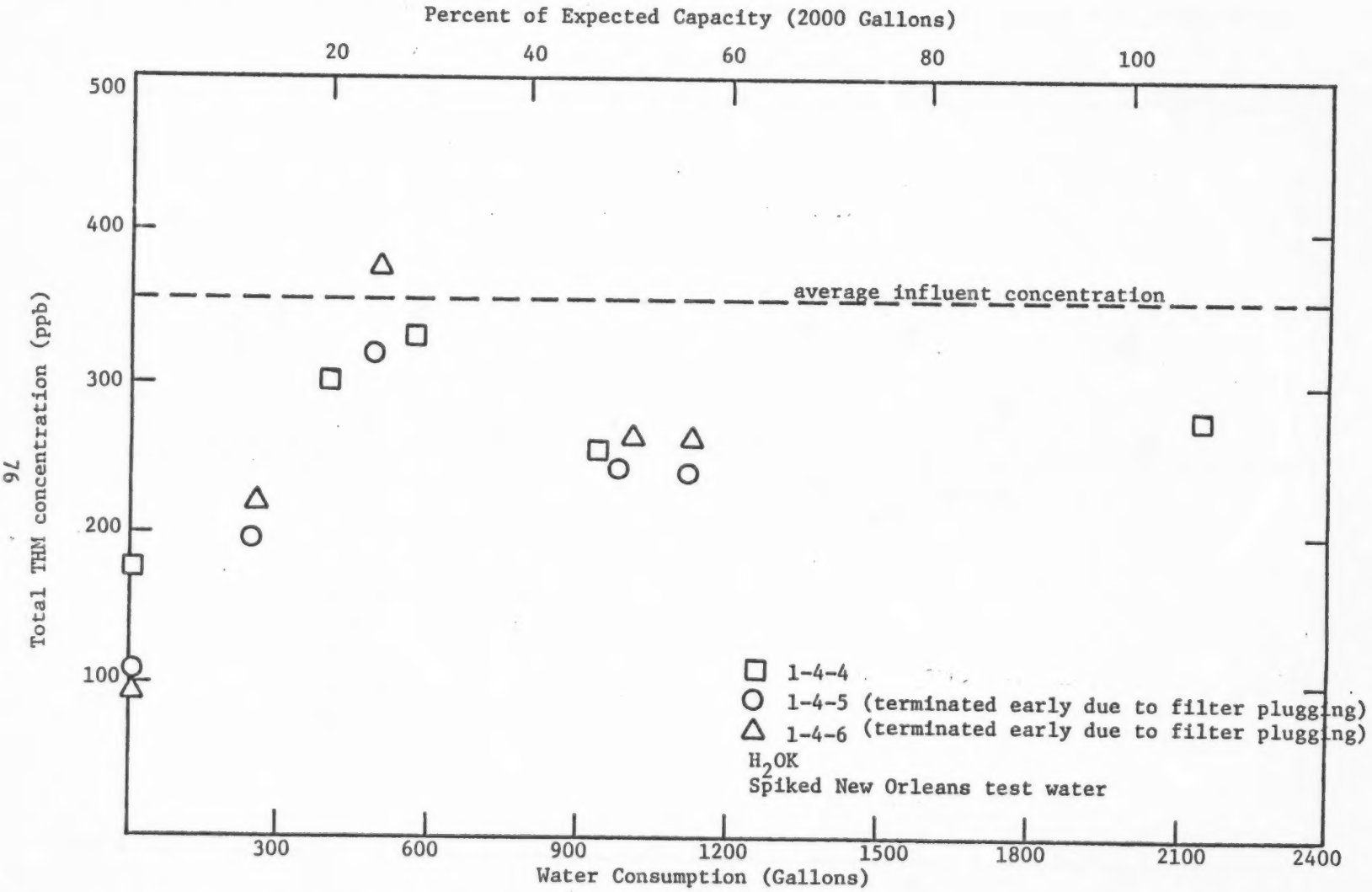

Figure S11. Influent and effluent total trihalomethane concentration versus water consumption.

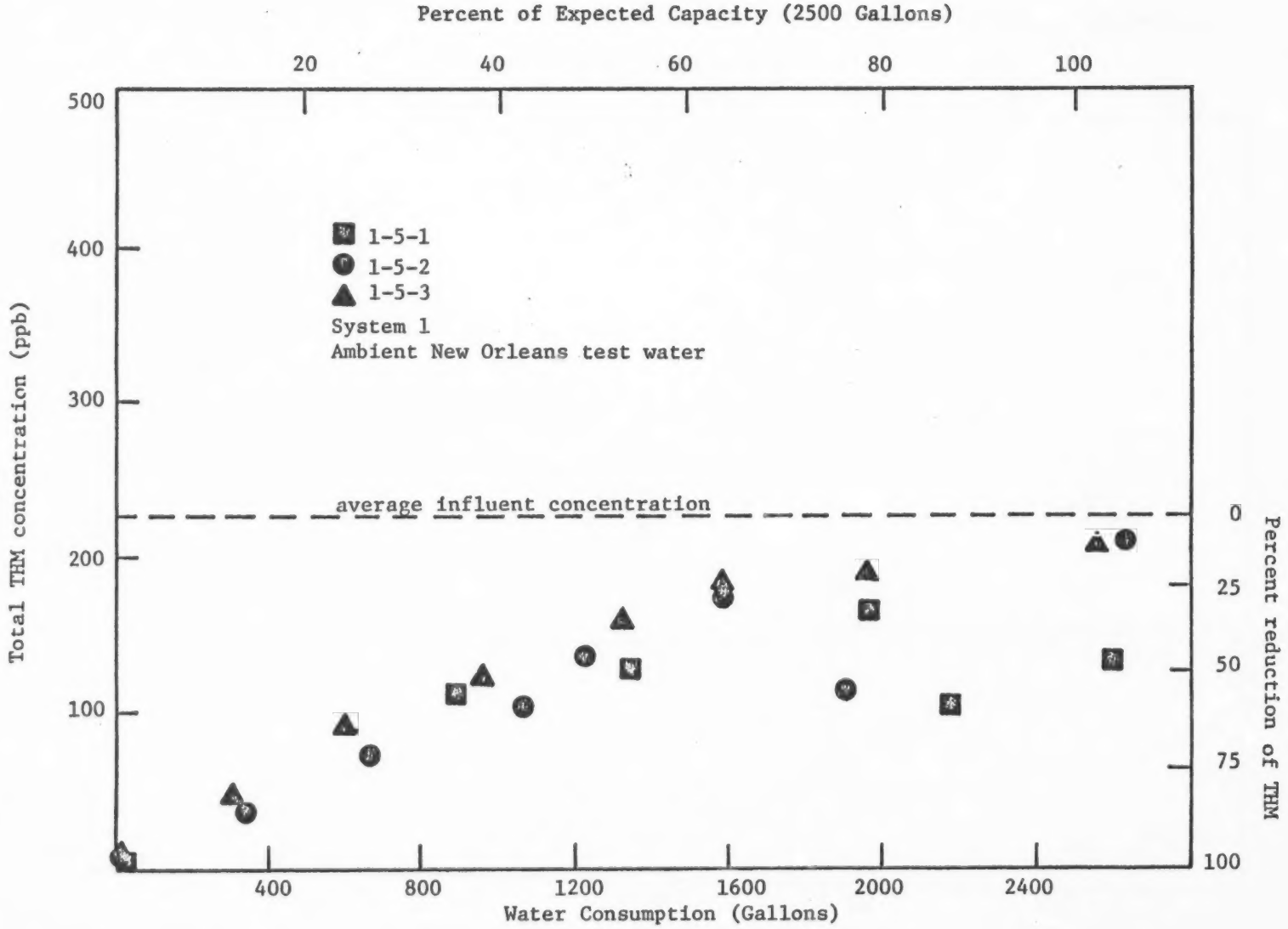

Figure S12. Influent and effluent total trihalomethane concentration versus water consumption.

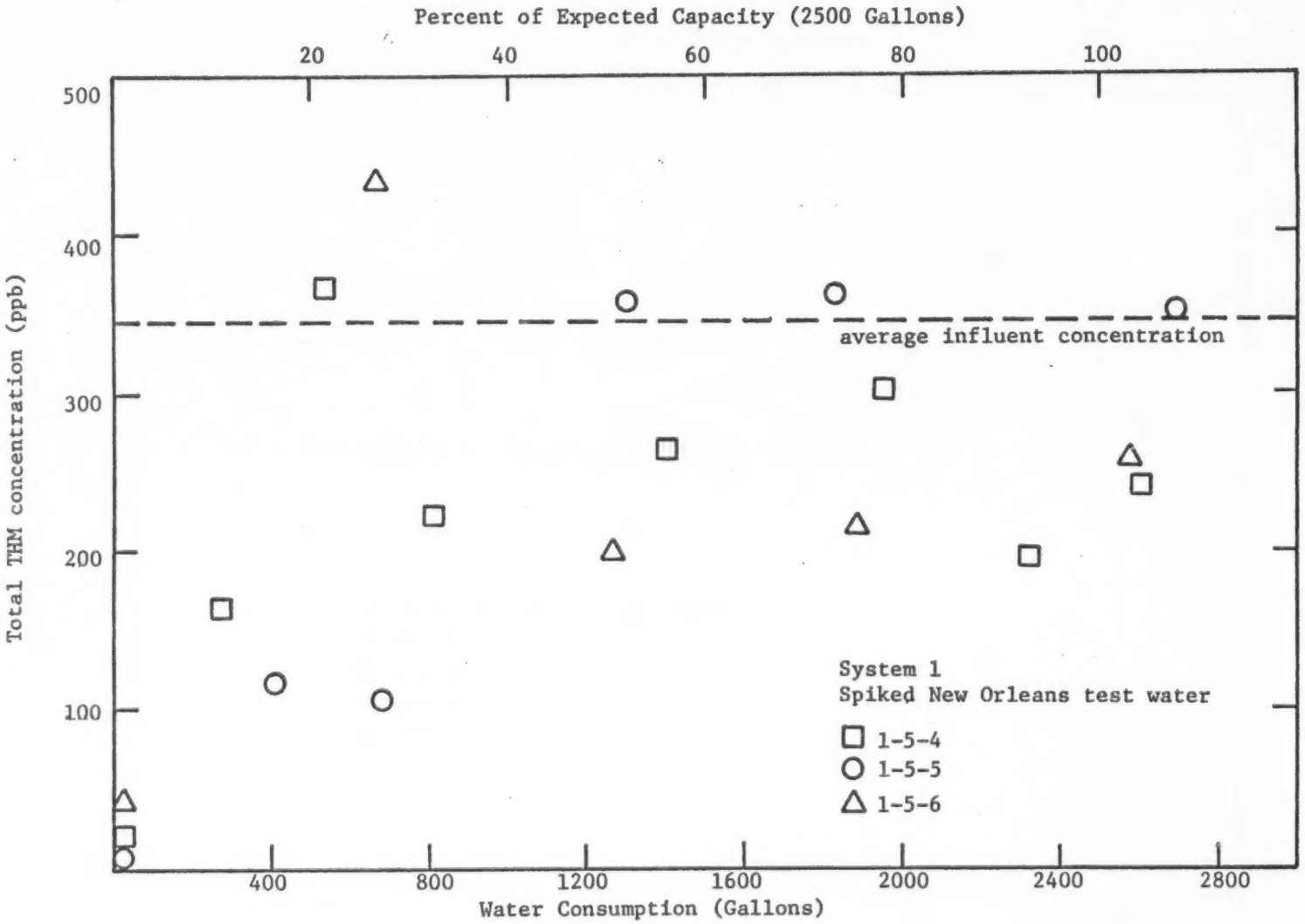

Figure S13. Influent and effluent total trihalomethane concentration versus water consumption.

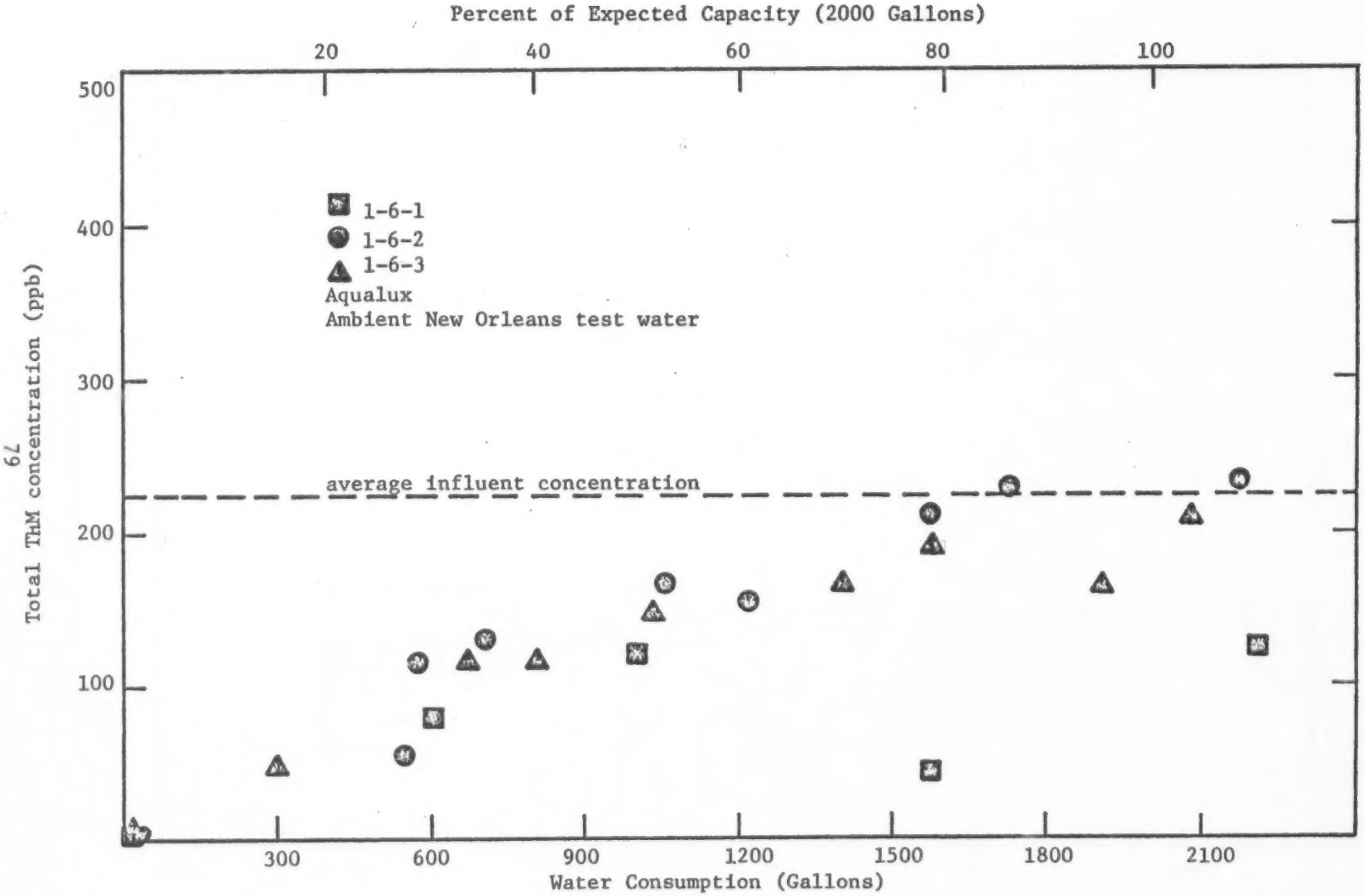

Figure S14. Influent and effluent total trihalomethane concentration versus water consumption.

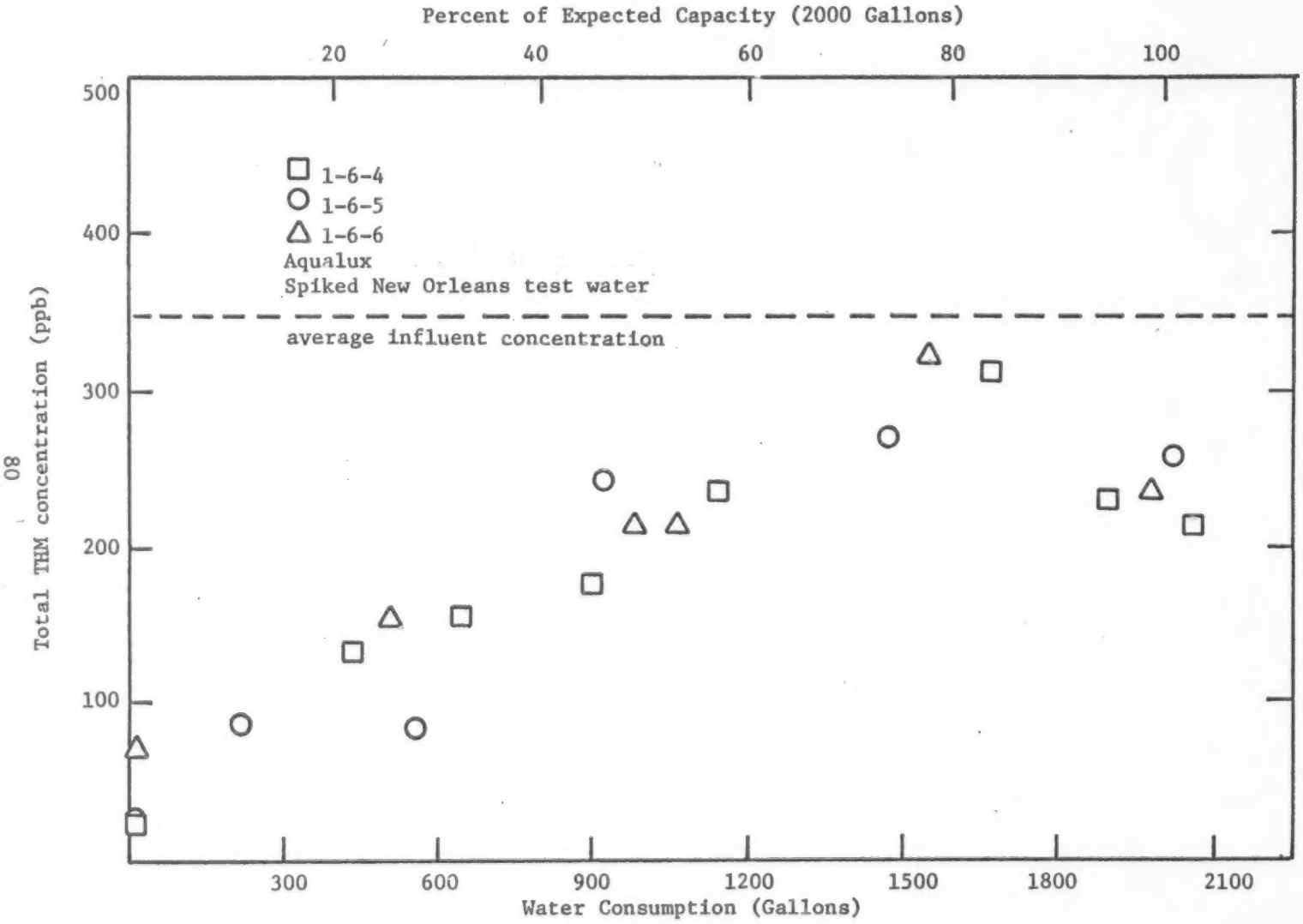

Figure S15. Influent and effluent total trihalomethane concentration versus water consumption.

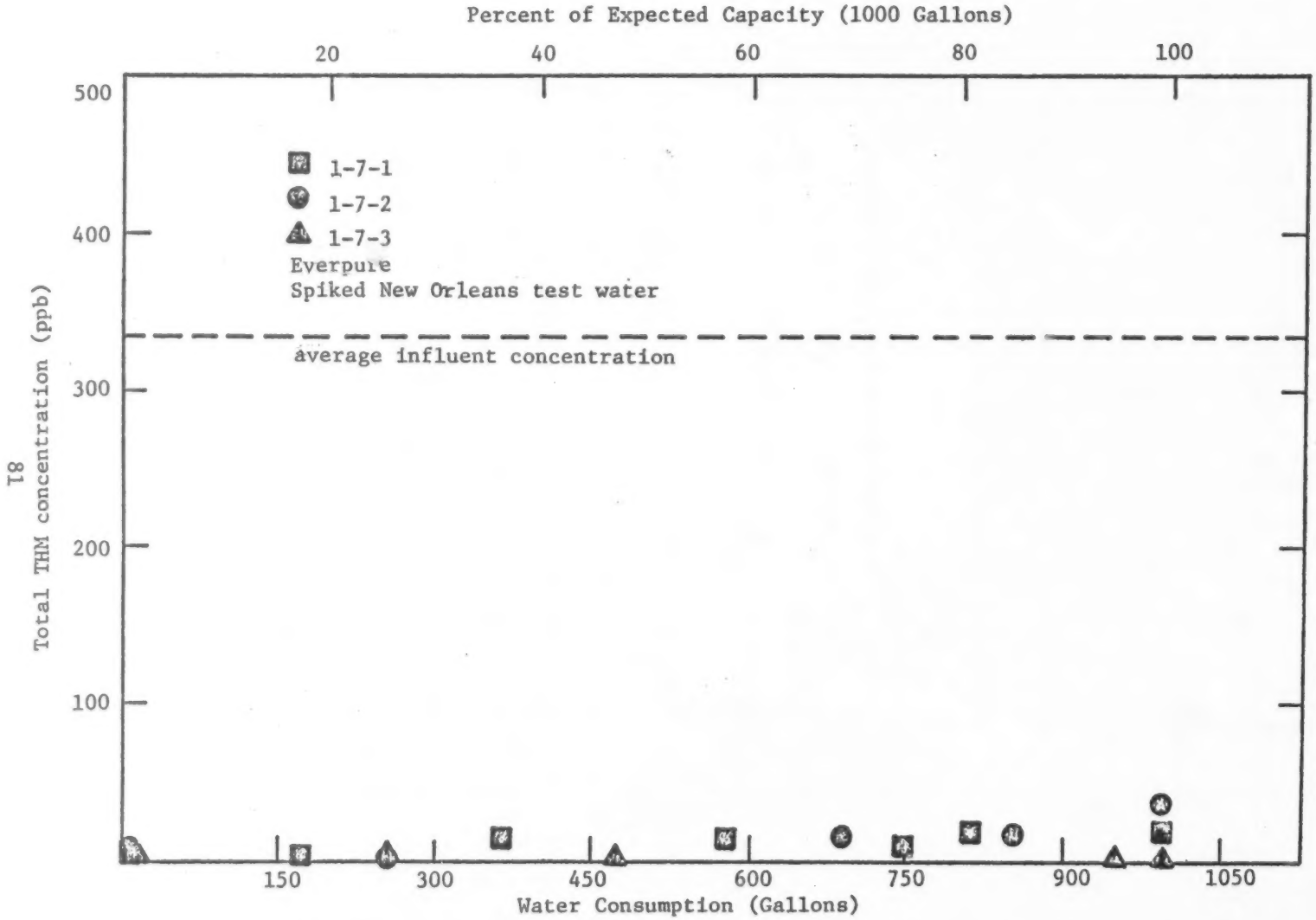

Figure S16. Influent and effluent total trihalomethane concentration versus water consumption.

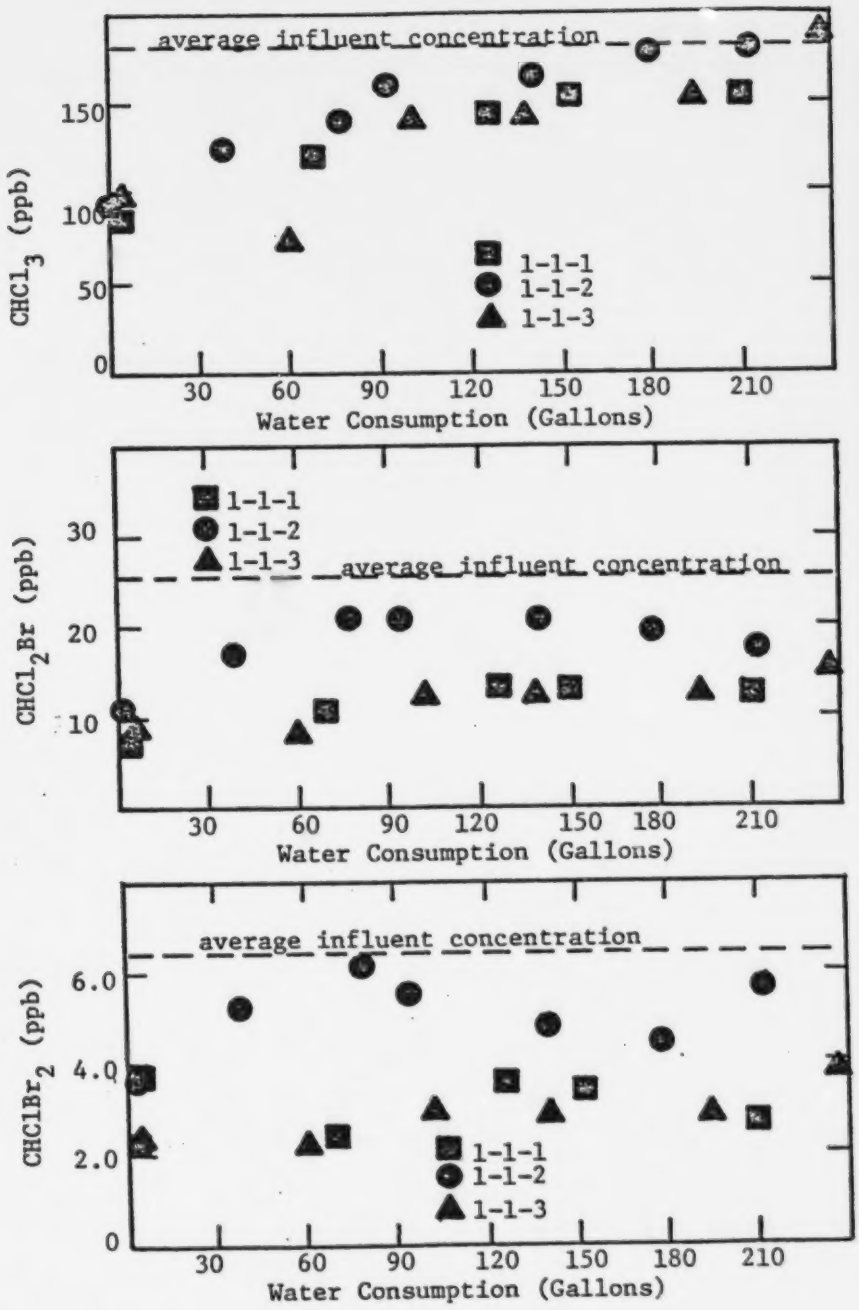

Figure S17. Specific influent and effluent THM data on Instapure. Ambient New Orleans test water.

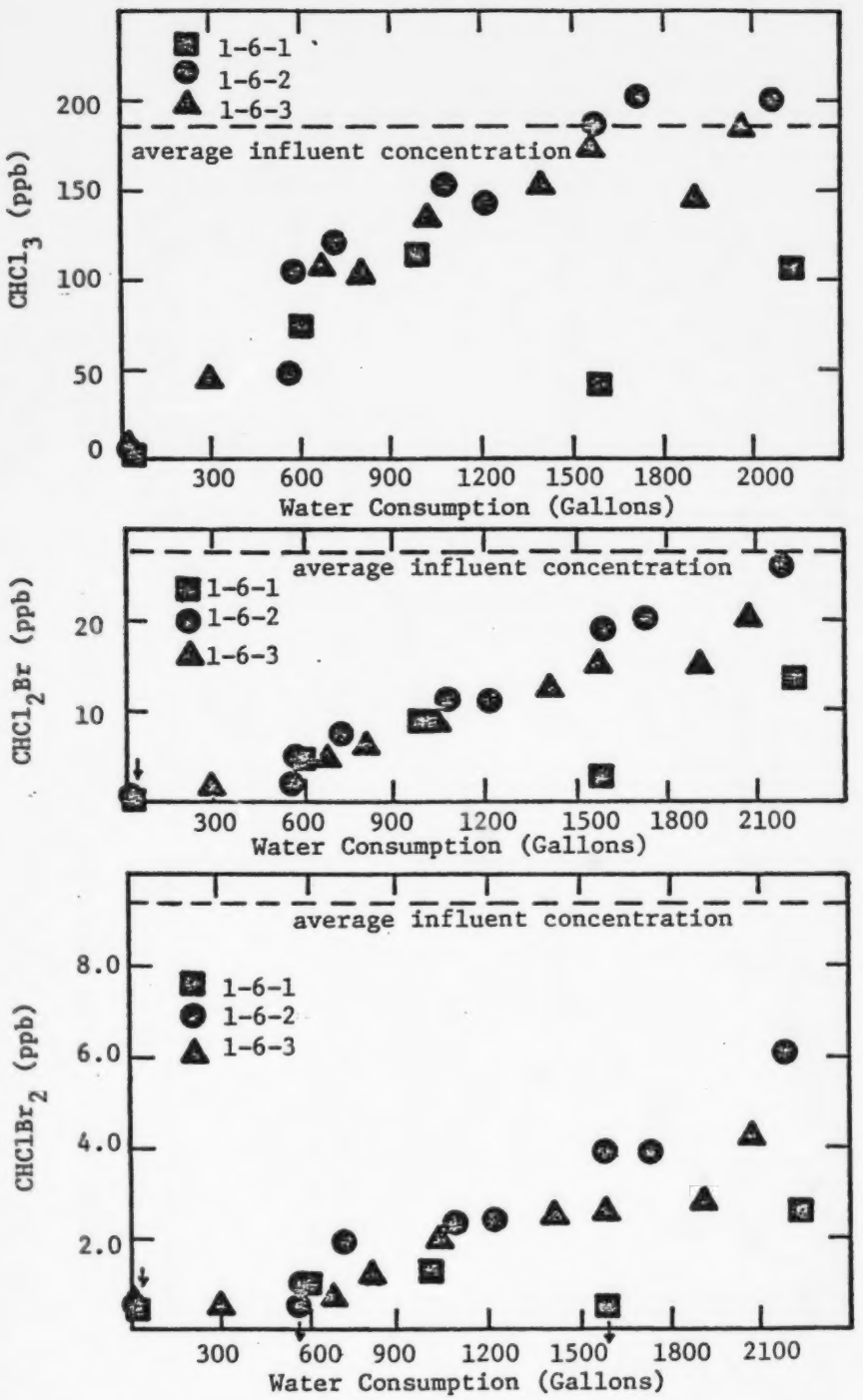

Figure S18. Specific influent and effluent THM data on Aqualux. Ambient New Orleans test water.

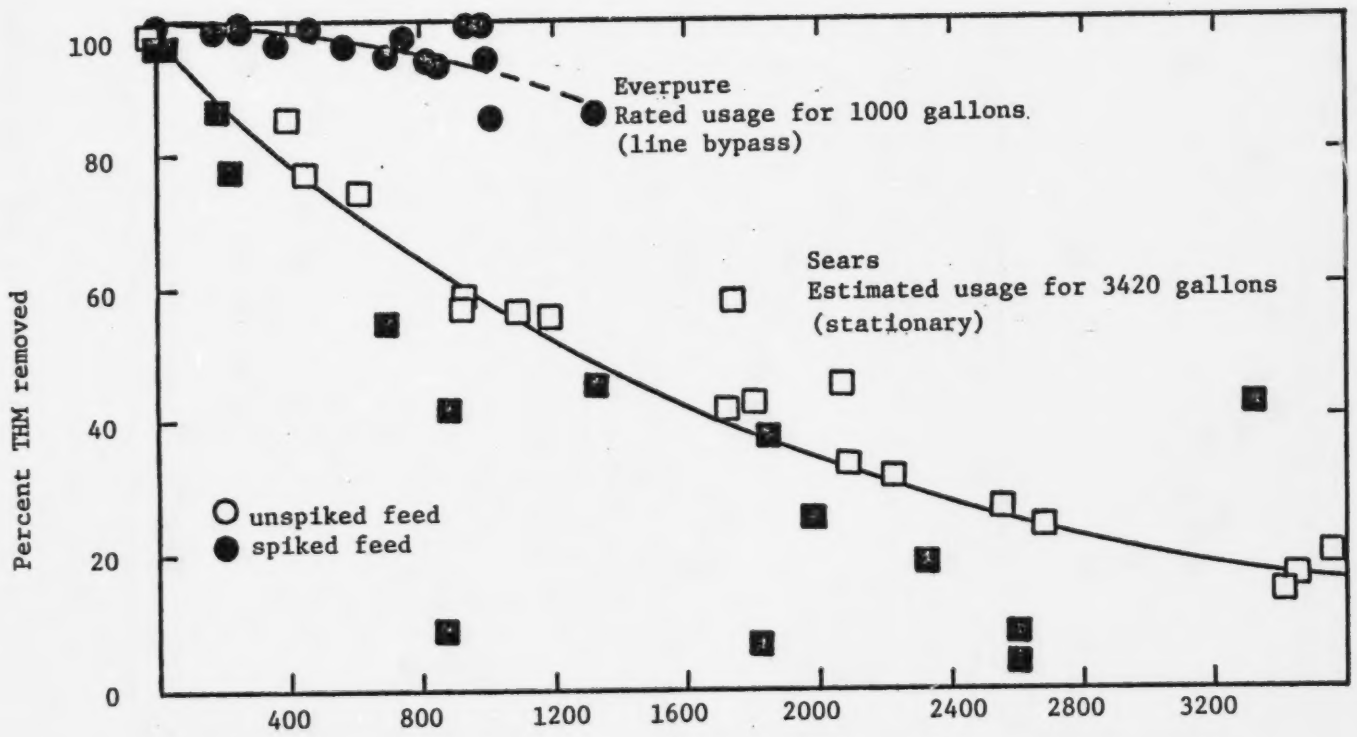

Figure S19. Percent reduction in THM versus gallons processed.

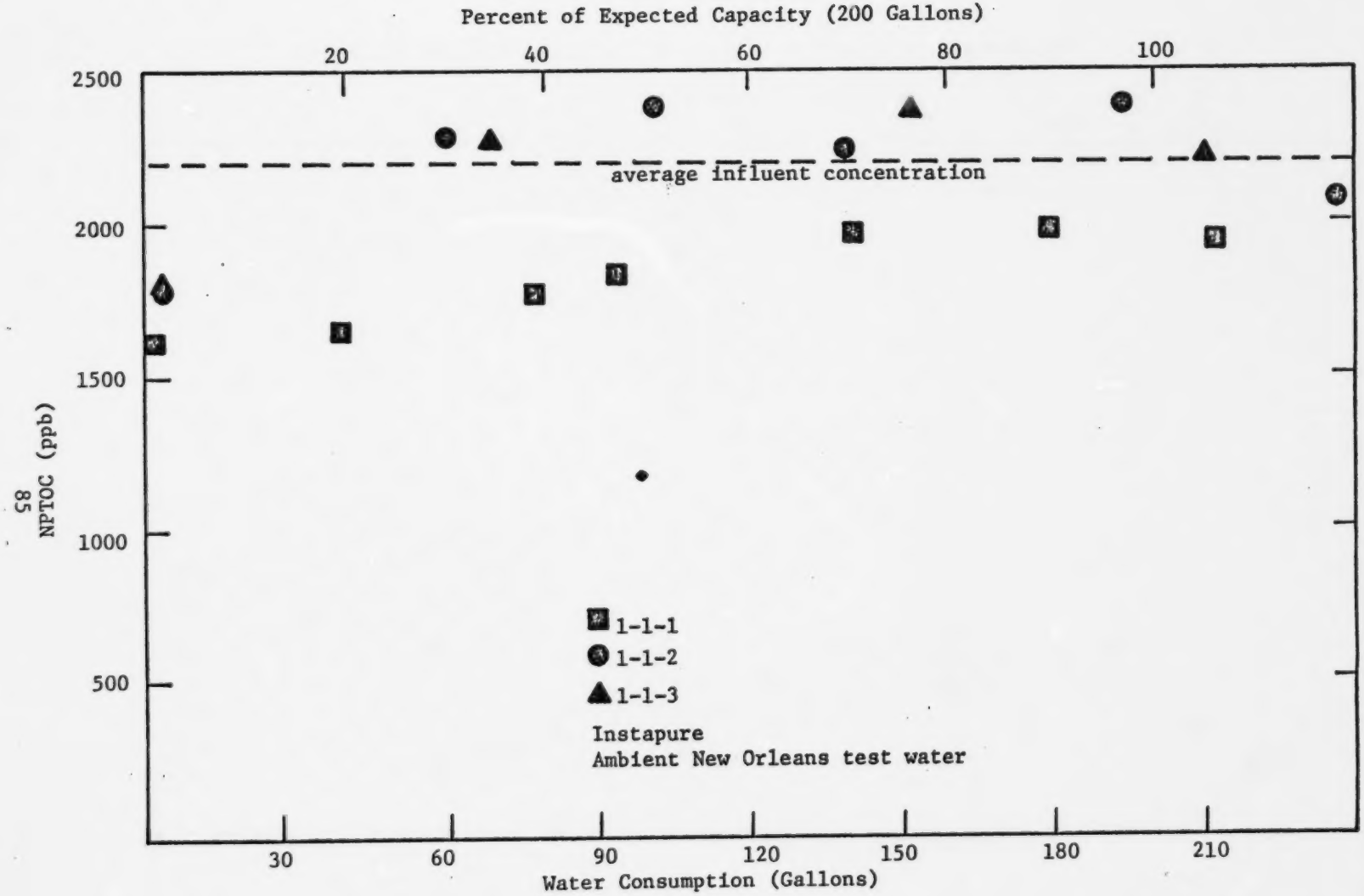

Figure S20. Influent and effluent NPTOC versus water consumption.

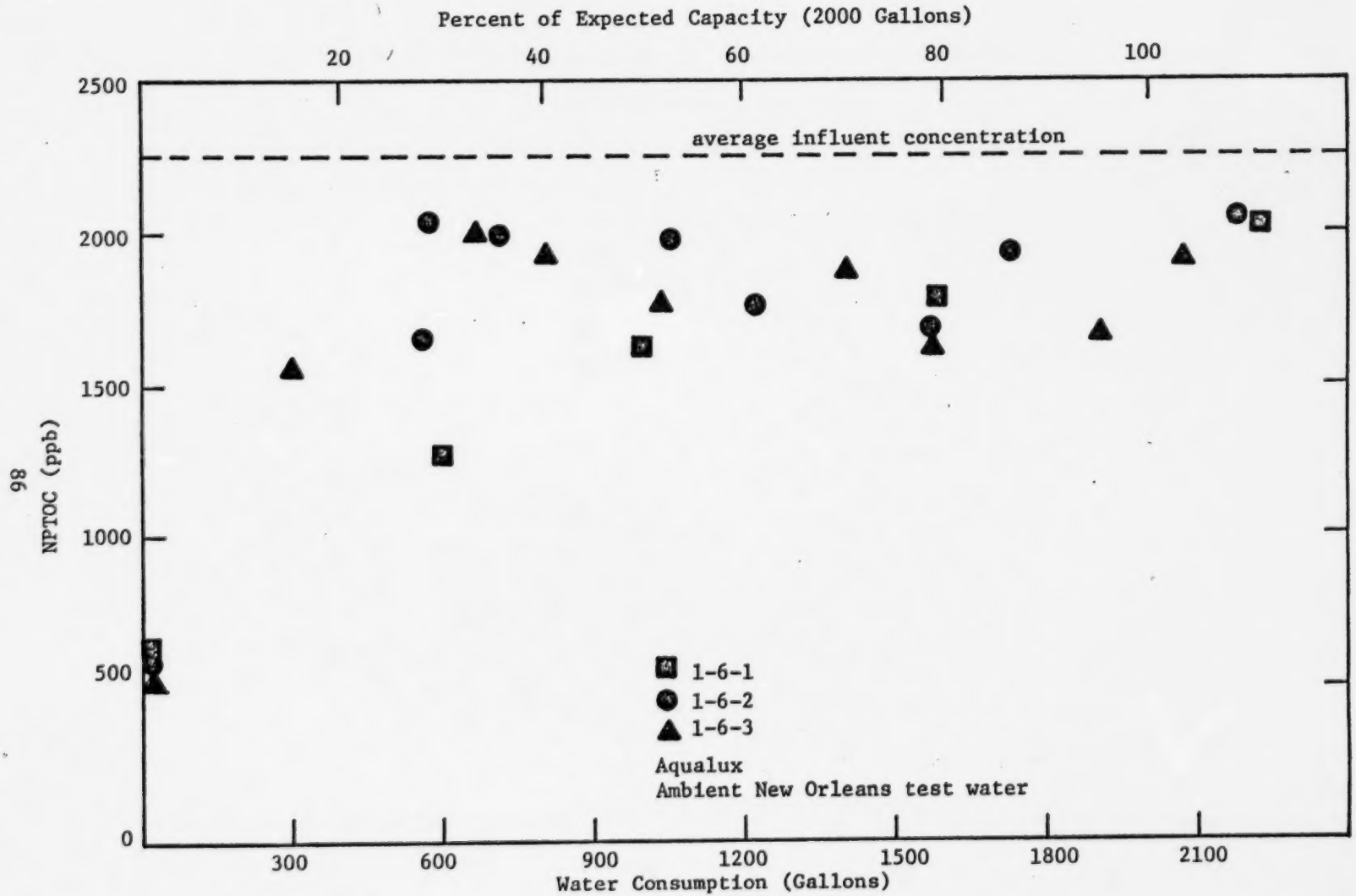

Figure S21. Influent and effluent NPTOC versus water consumption.

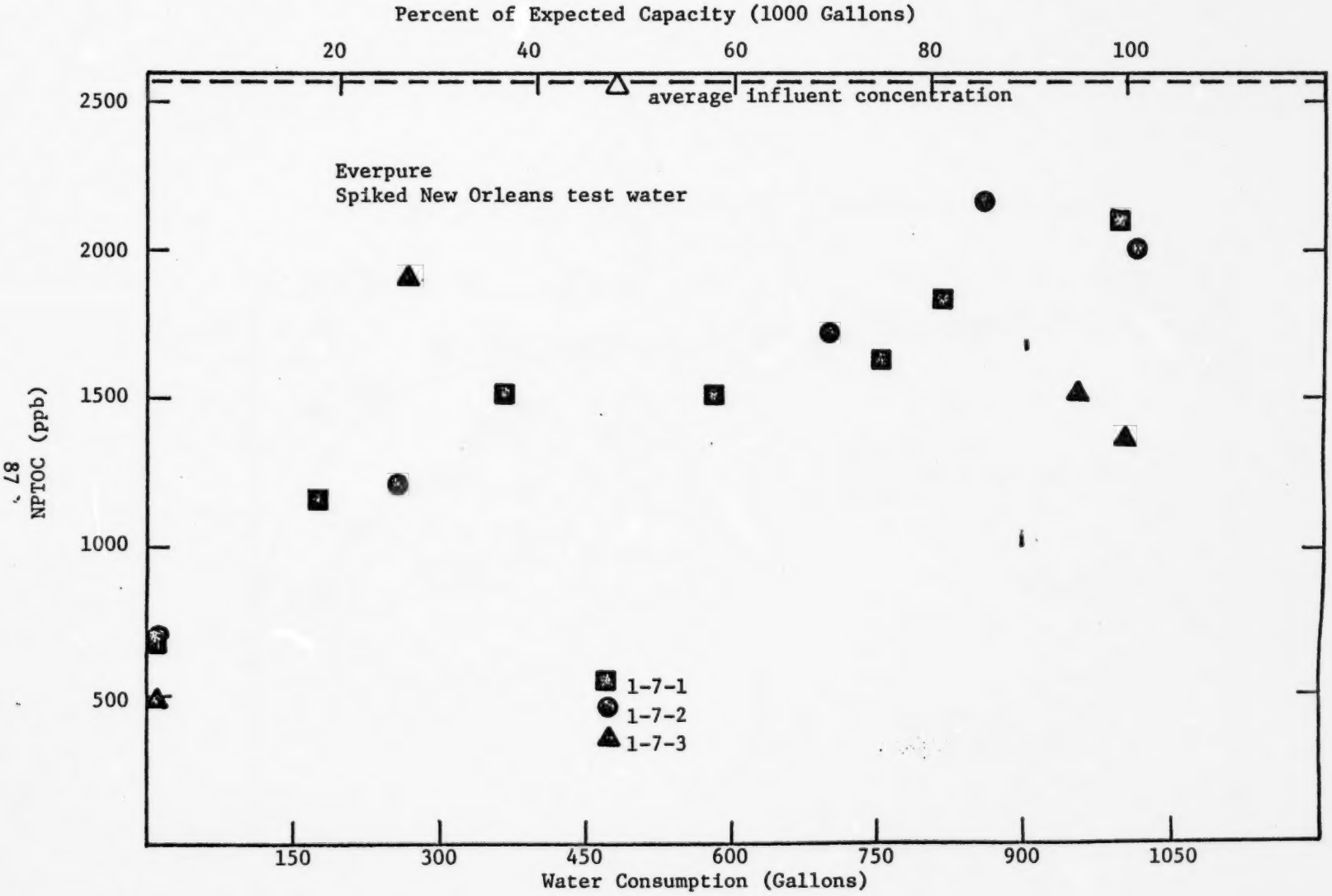

Figure S22. Influent and effluent NPTOC versus water consumption.

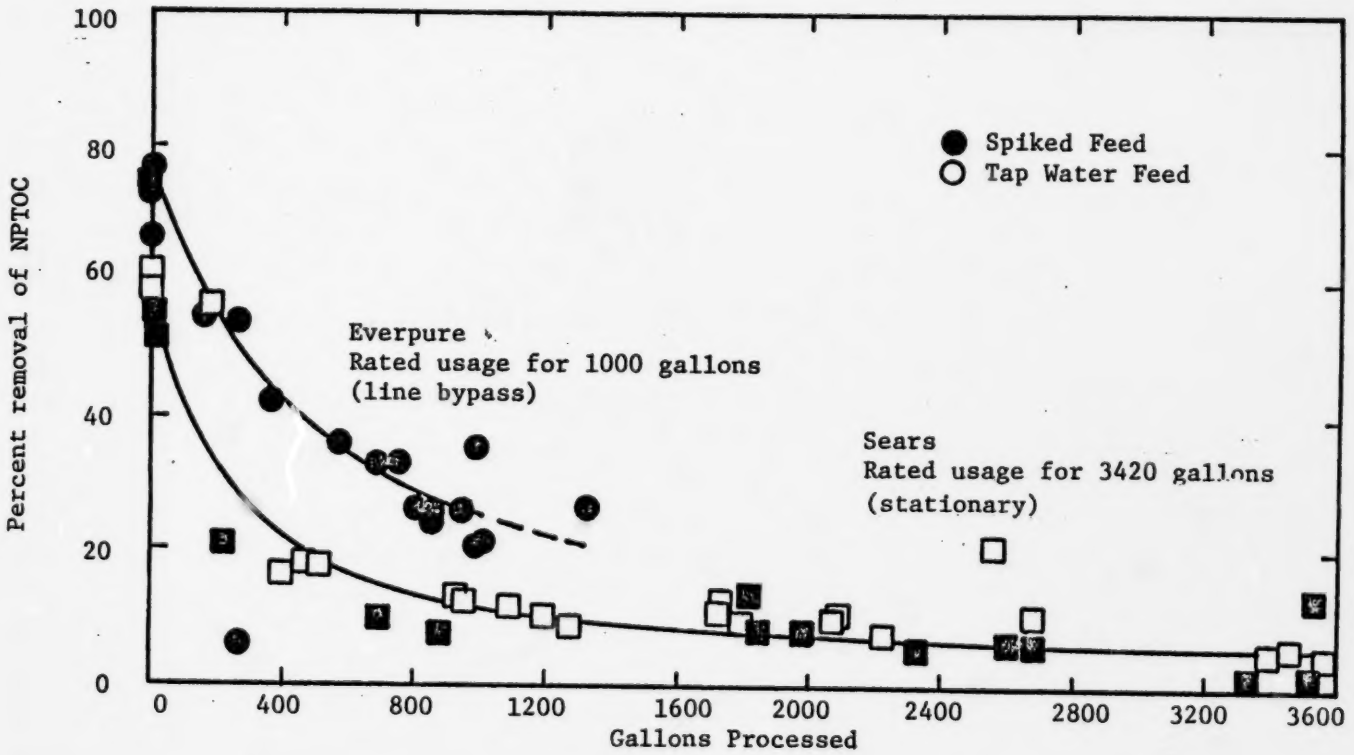

Figure S23. Percent reduction in NPTOC versus gallons processed.

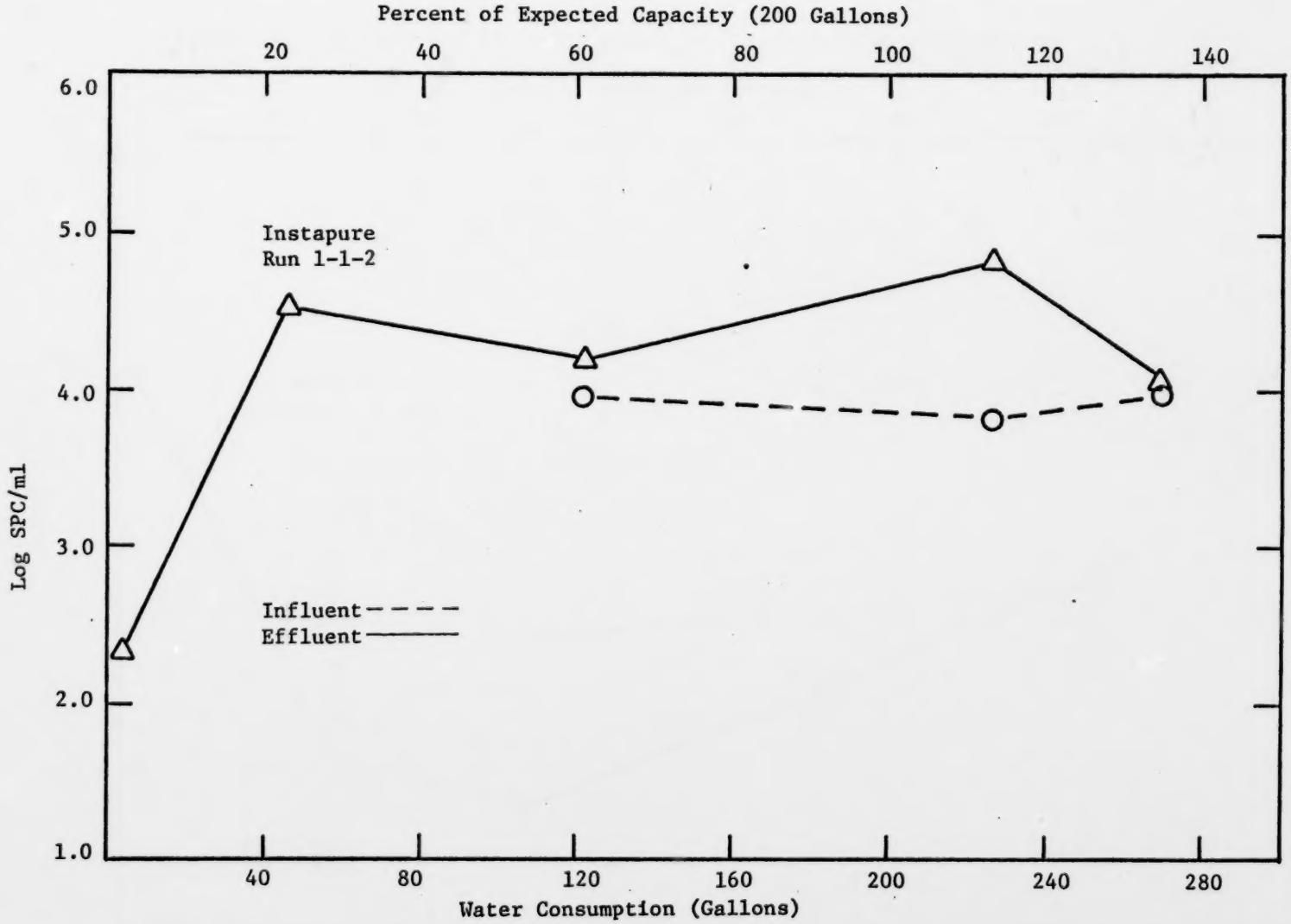

Figure S24. Influent and effluent plate count versus water consumption.

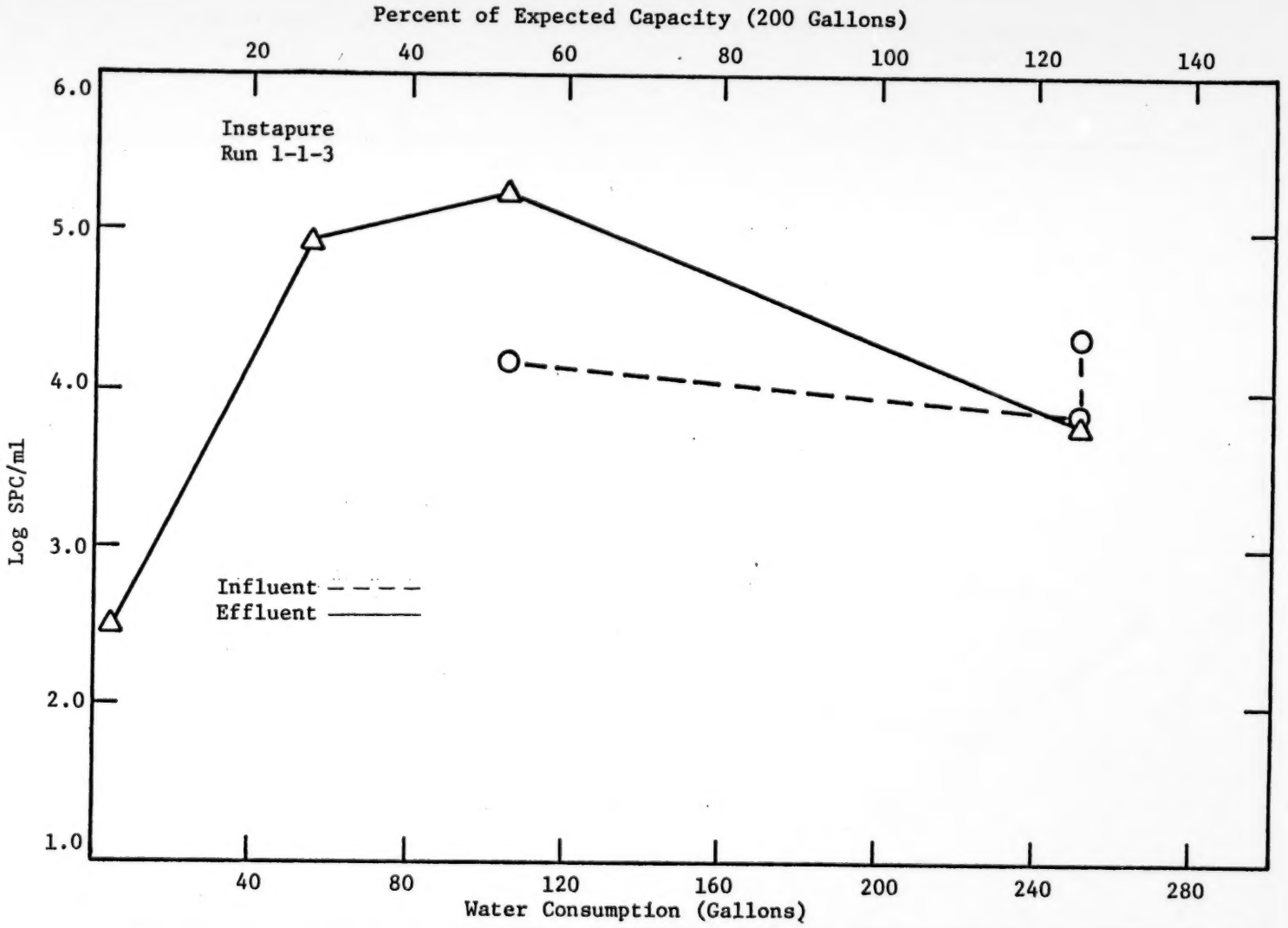

Figure 825. Influent and effluent plate count versus water consumption.

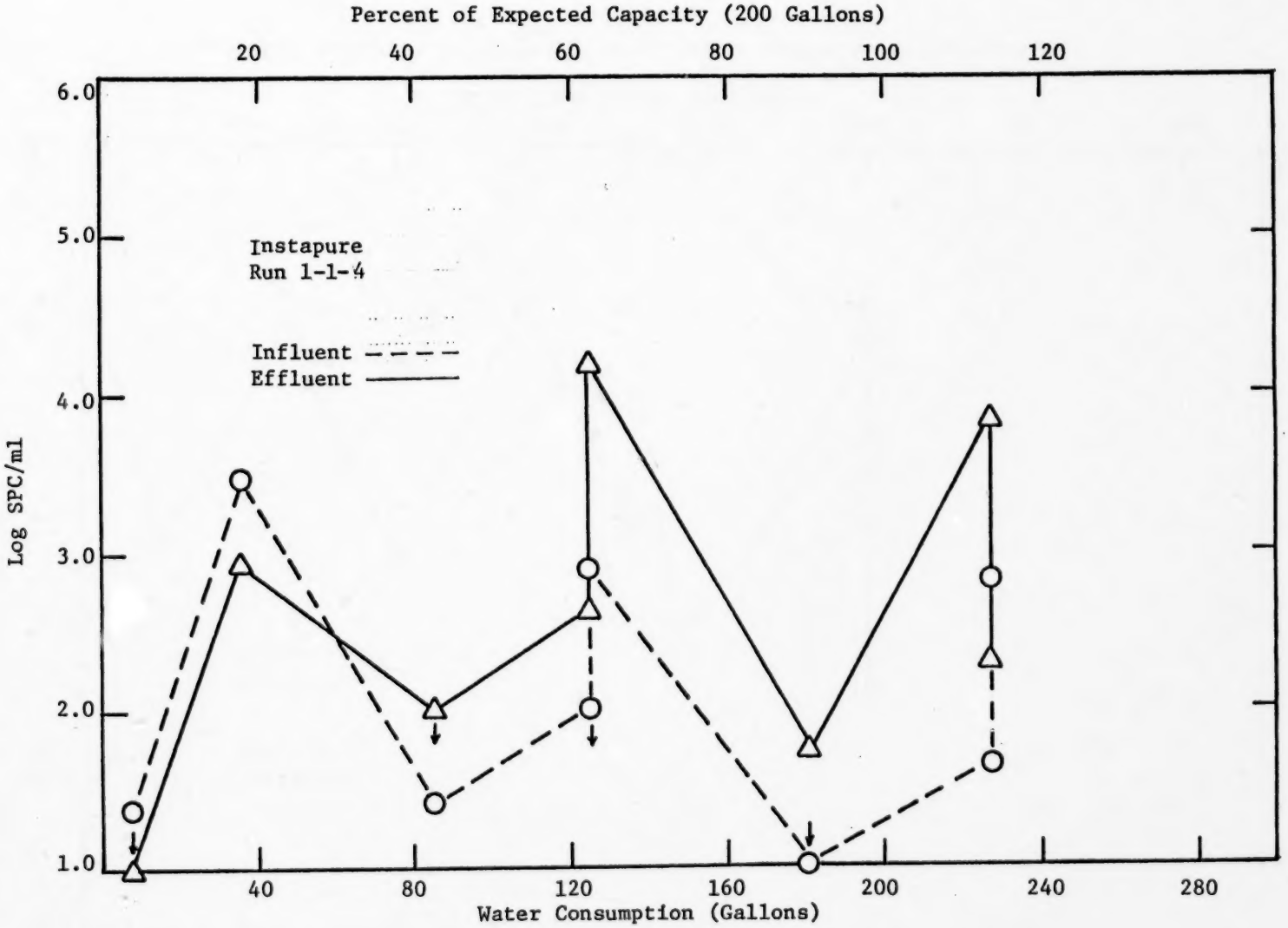

Figure 26. Influent and effluent plate counts versus water consumption.

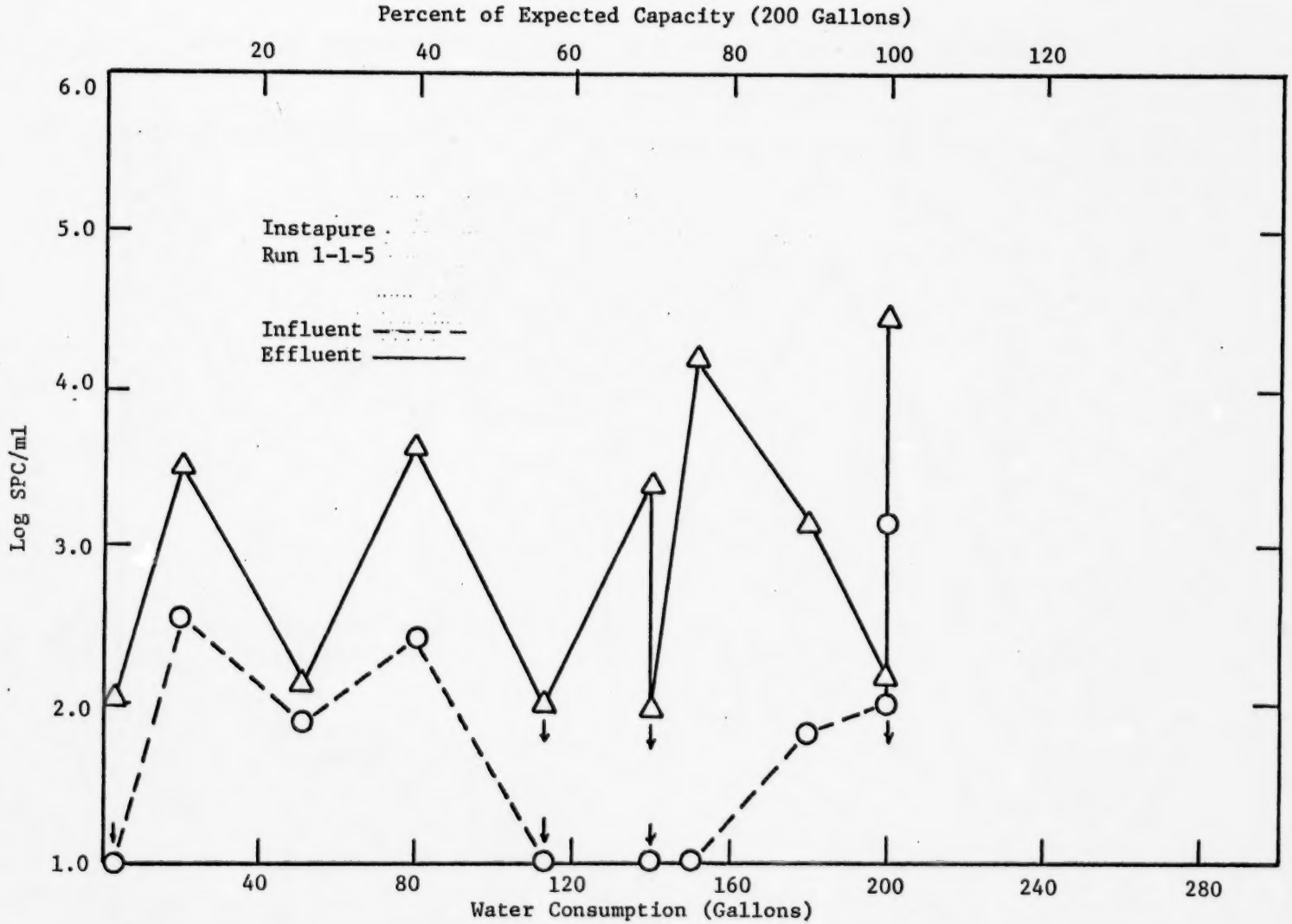

Figure S27. Influent and effluent plate counts versus water consumption.

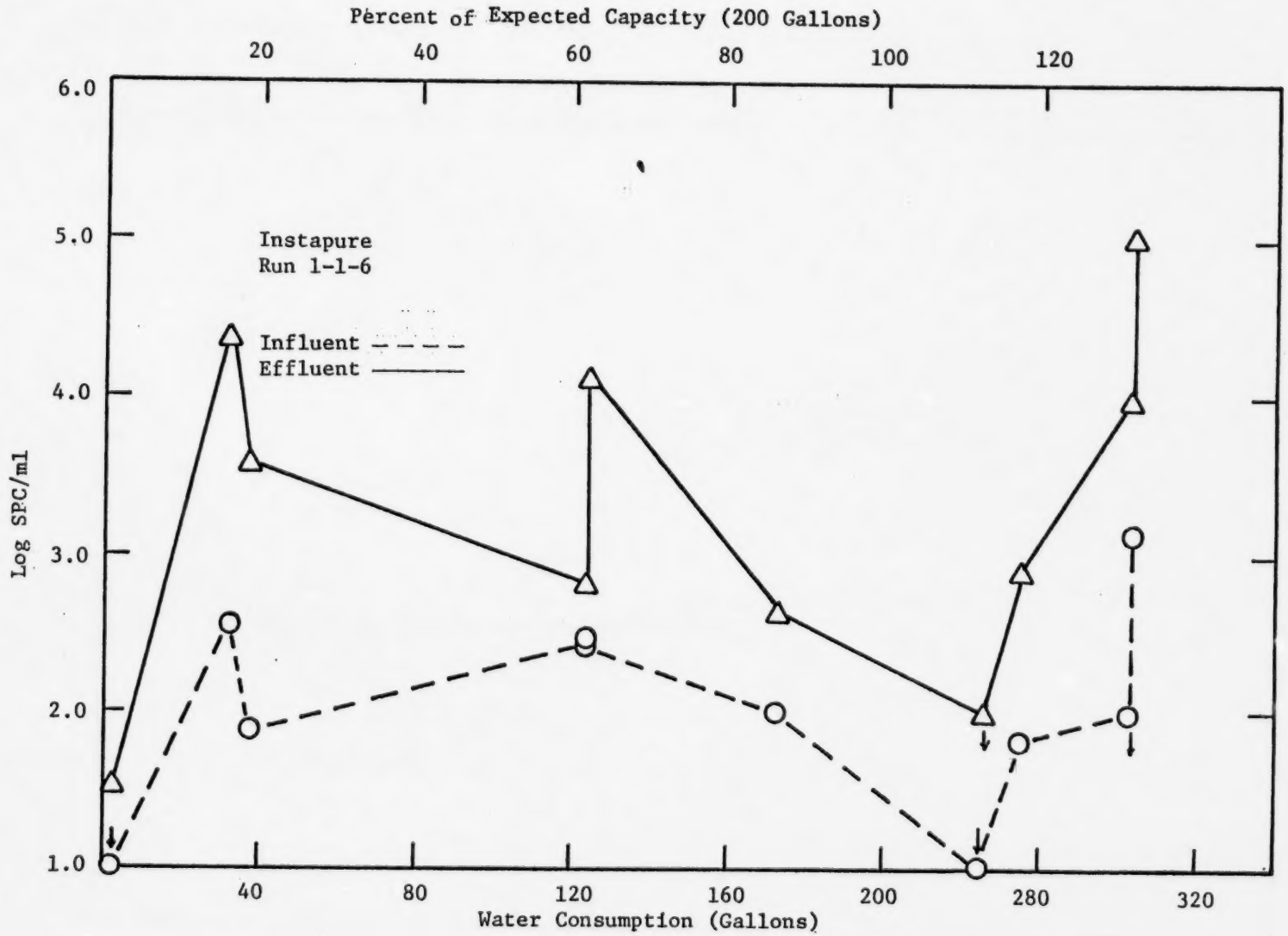

Figure S28. Influent and effluent plate counts versus water consumption.

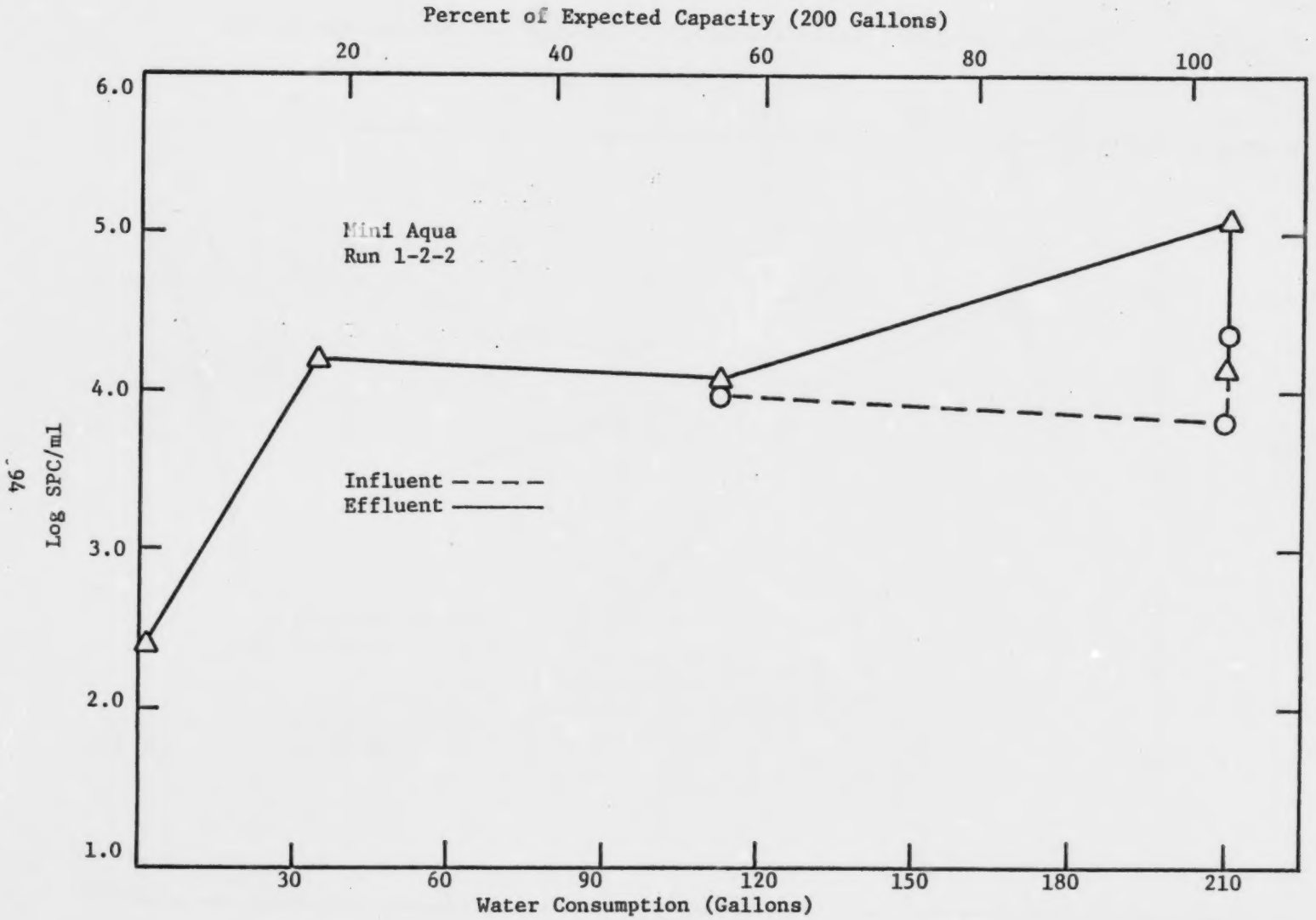

Figure S29. Influent and effluent plate count versus water consumption.

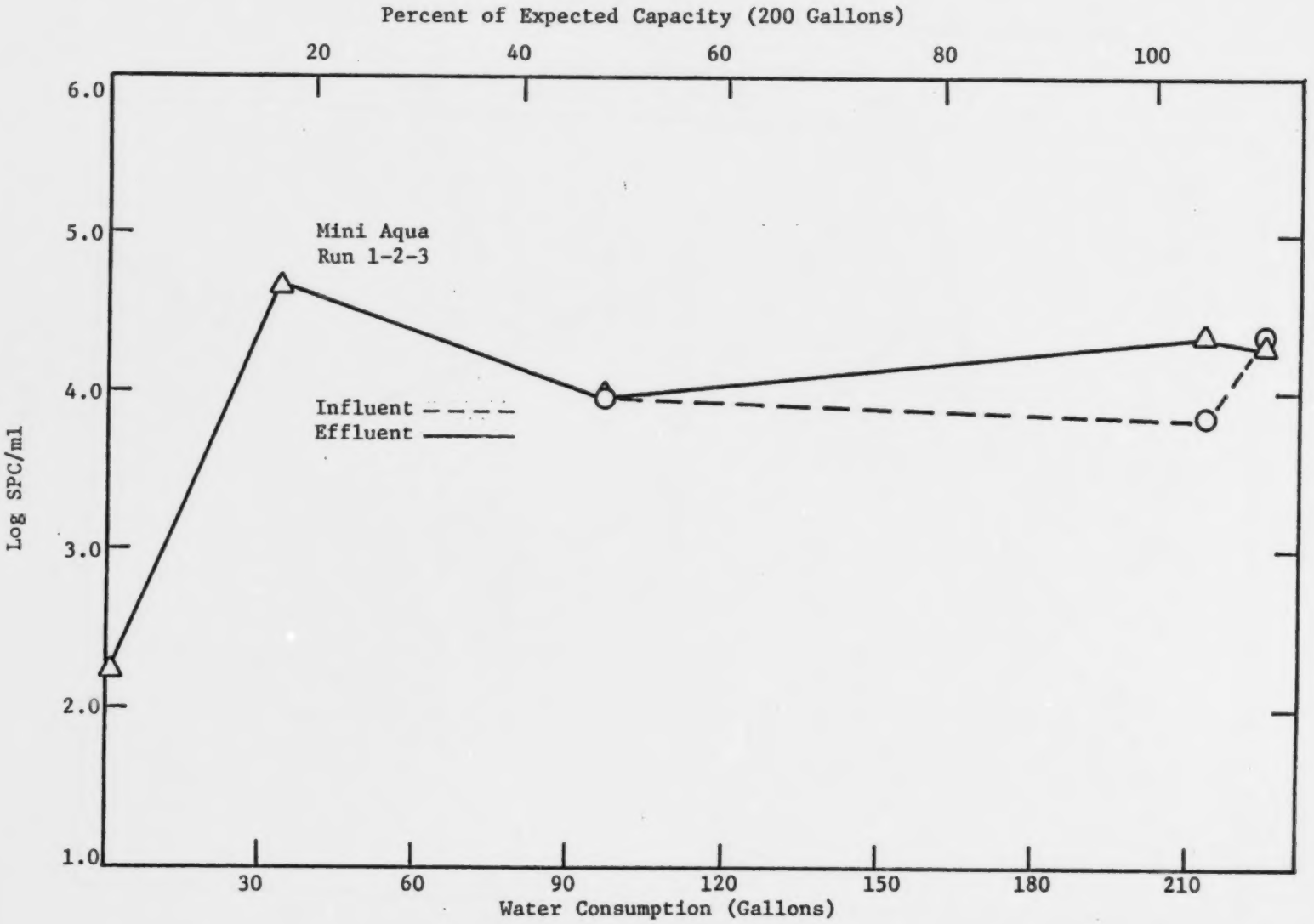

Figure S30. Influent and effluent plate count versus water consumption.

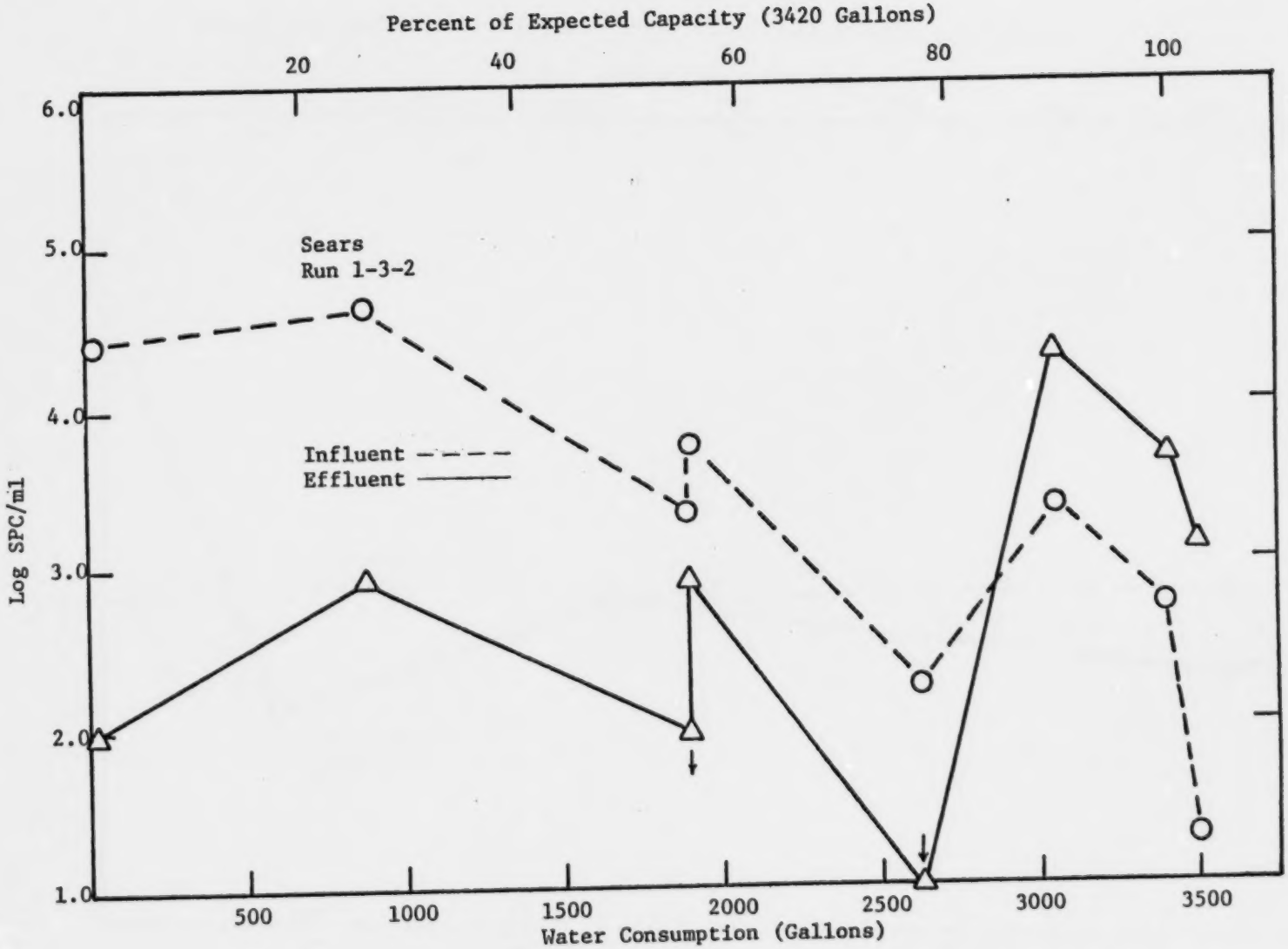

Figure S31. Influent and effluent plate count versus water consumption.

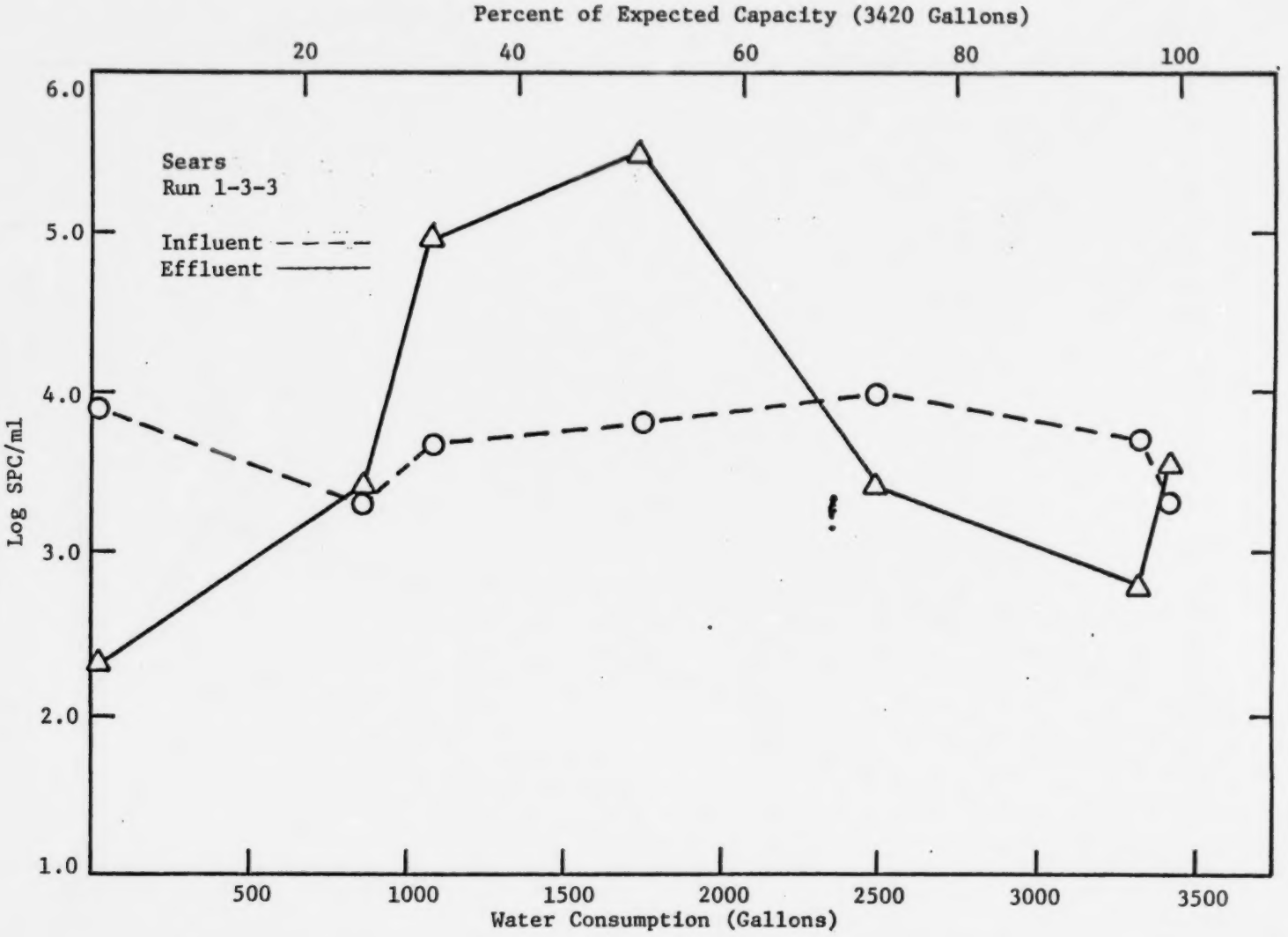

Figure S32. Influent and effluent plate counts versus water consumption.

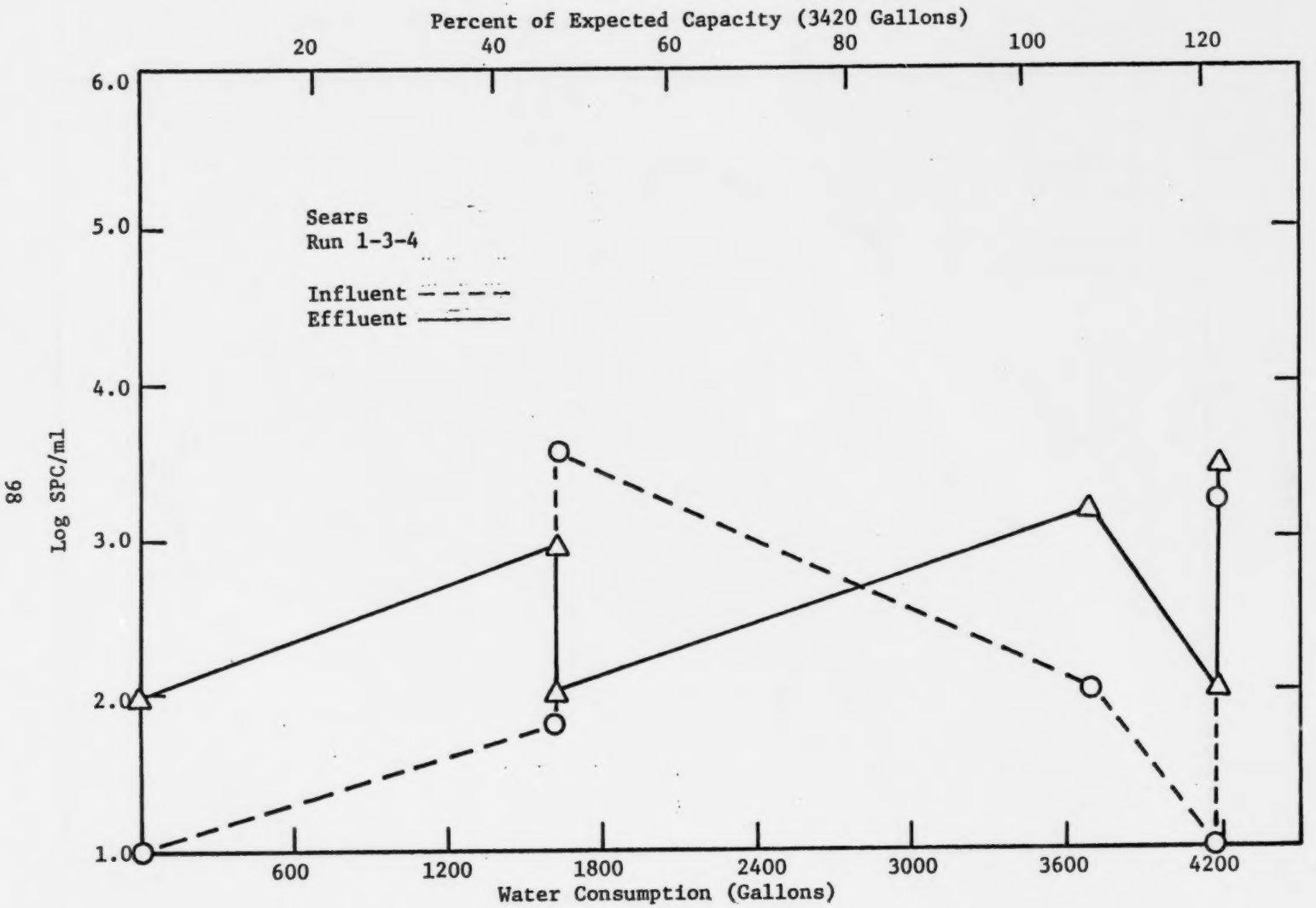

Figure S33. Influent and effluent plate counts versus water consumption.

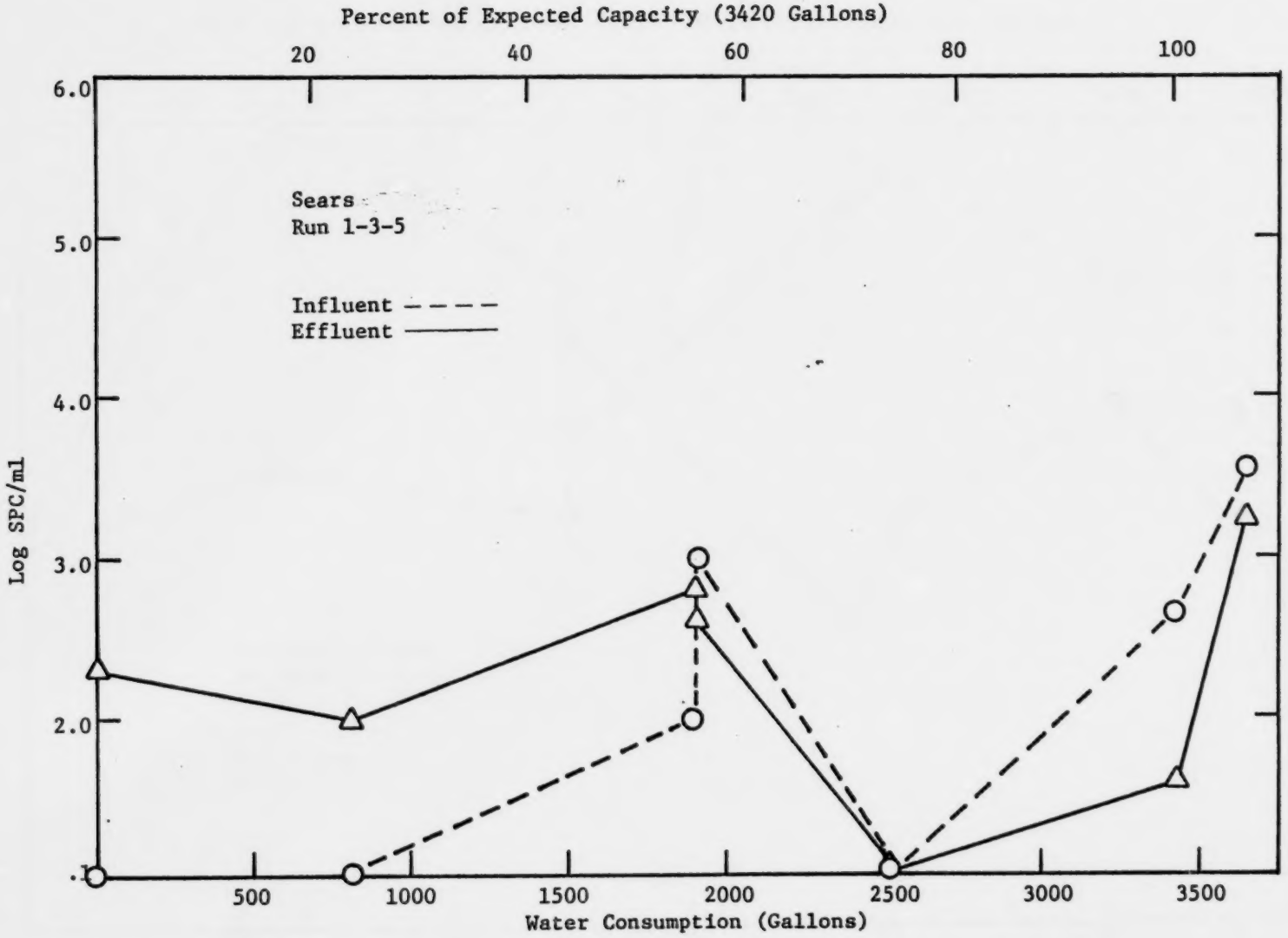

Figure S34. Influent and effluent plate counts versus water consumption.

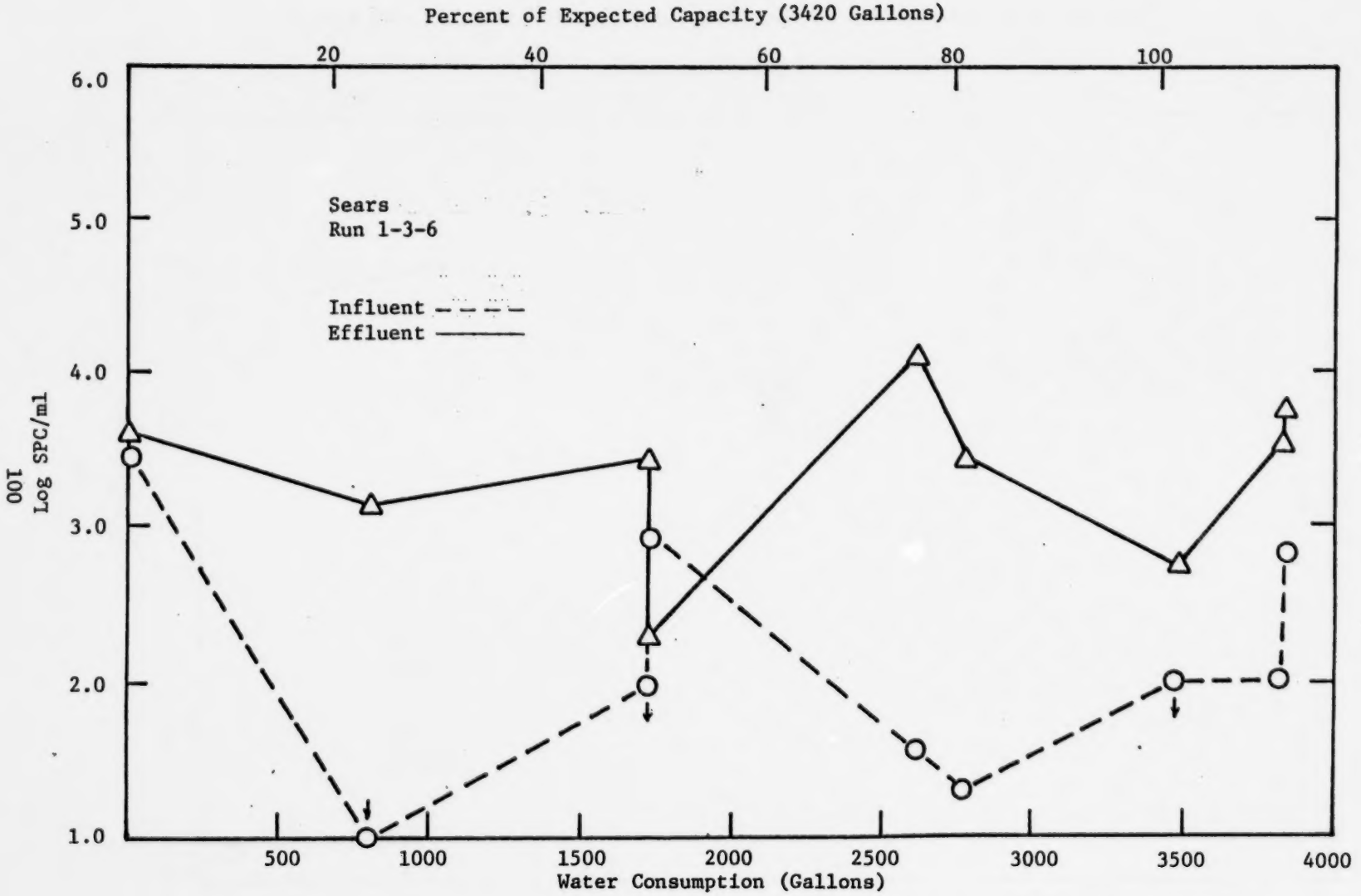

Figure S35. Influent and effluent plate counts versus water consumption.

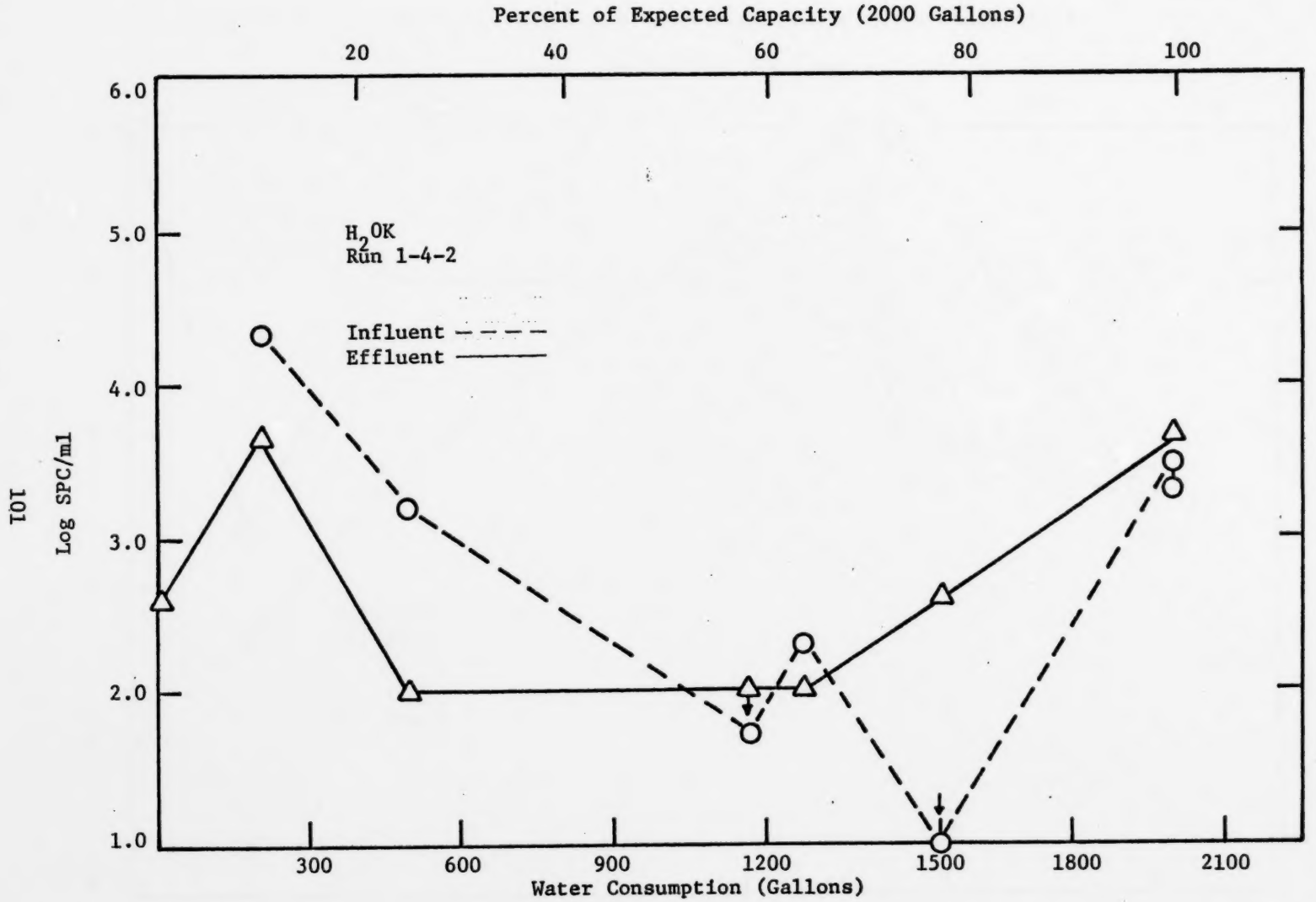

Figure S36. Influent and effluent plate count versus water consumption.

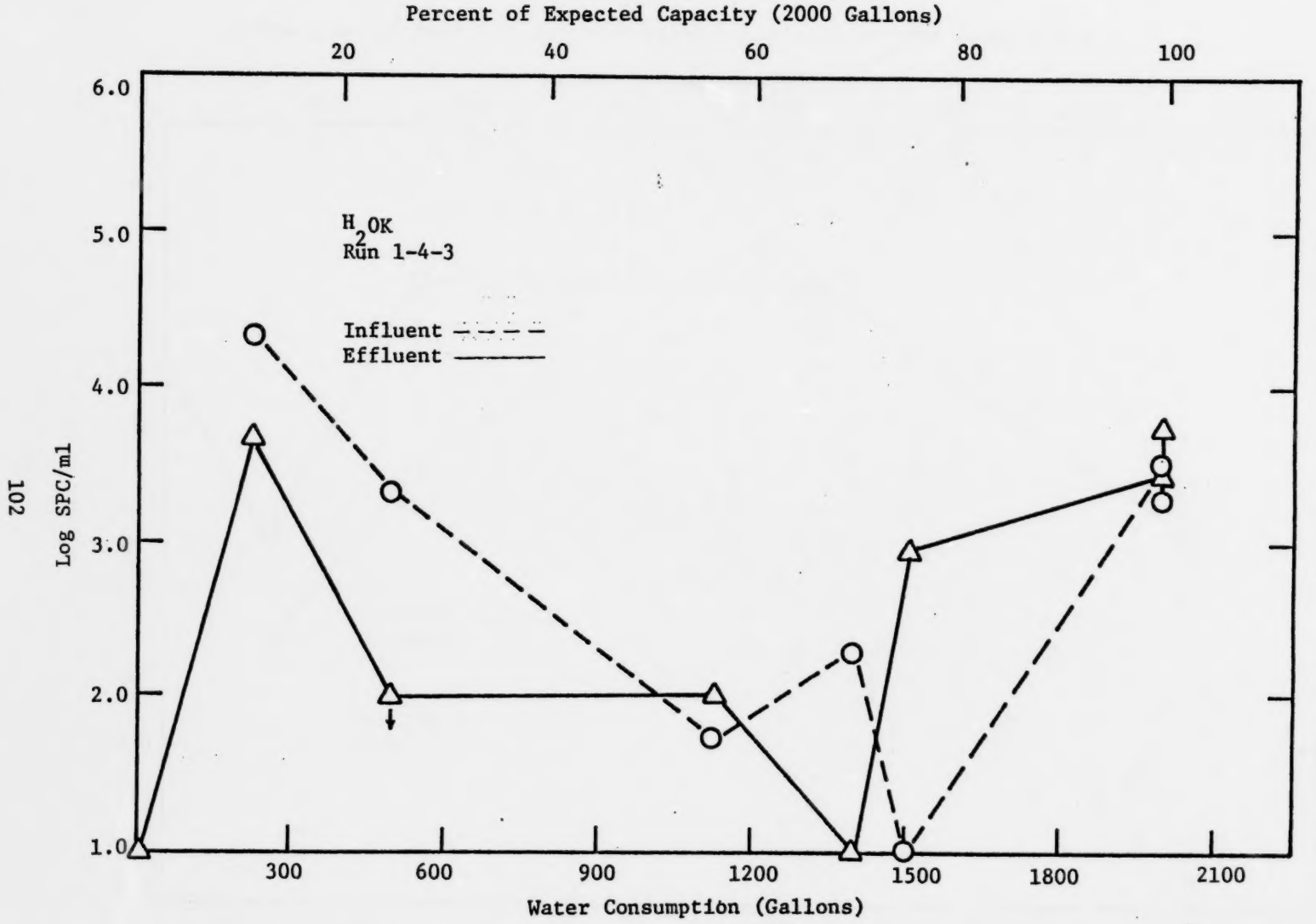

Figure S37. Influent and effluent plate counts versus water consumption.

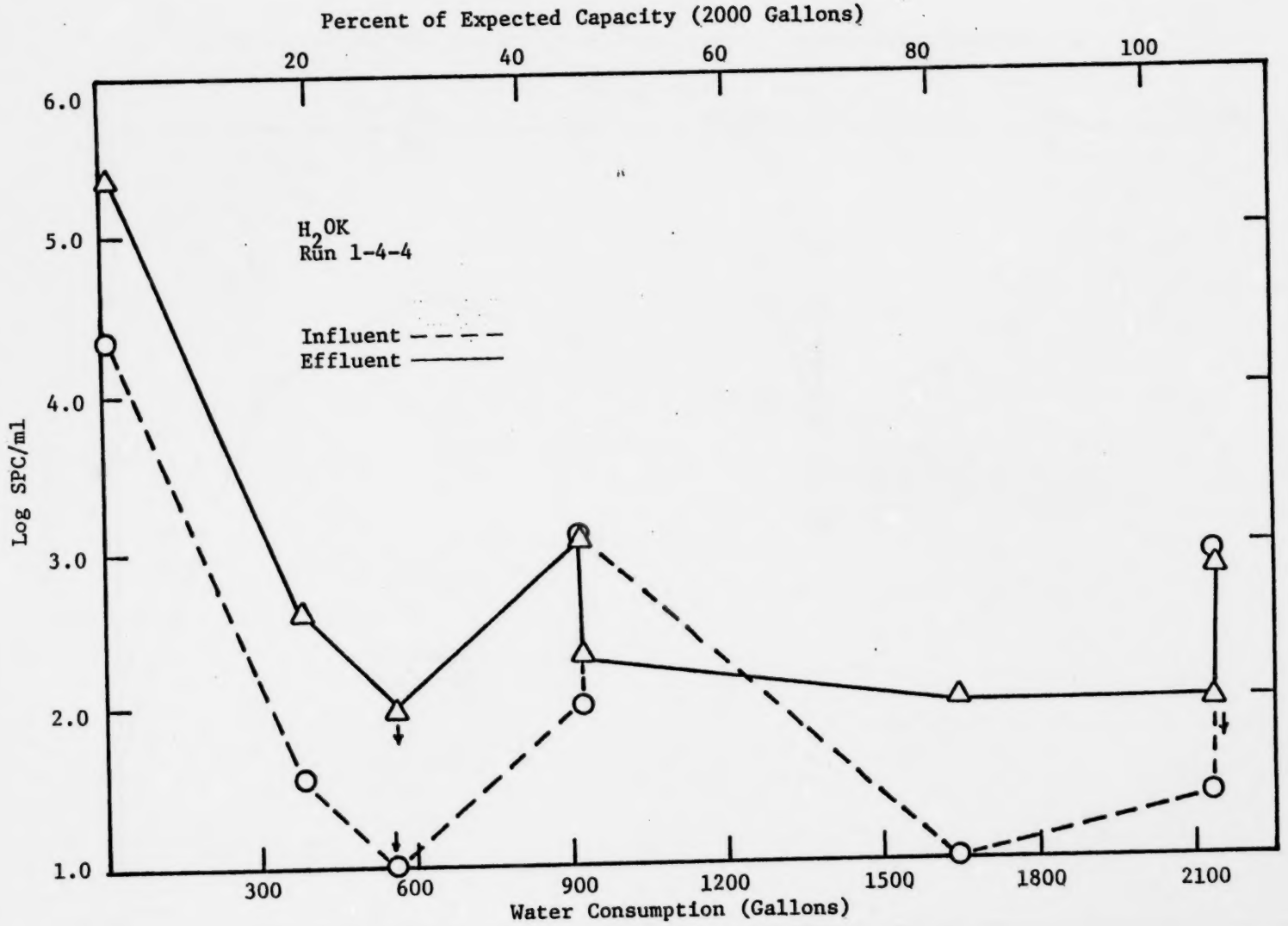

Figure S38. Influent and effluent plate counts versus water consumption.

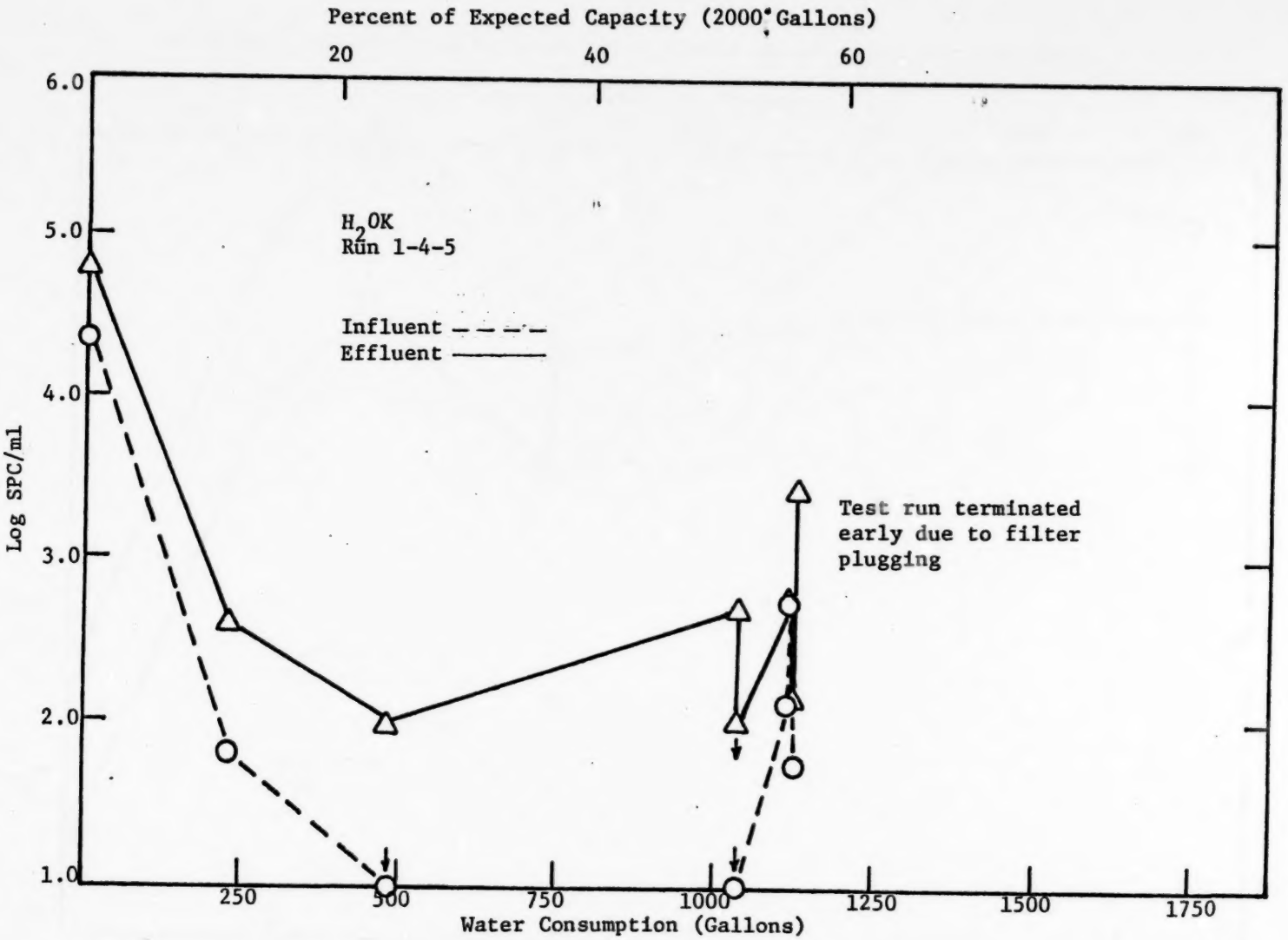

Figure S39. Influent and effluent plate counts versus water consumption.

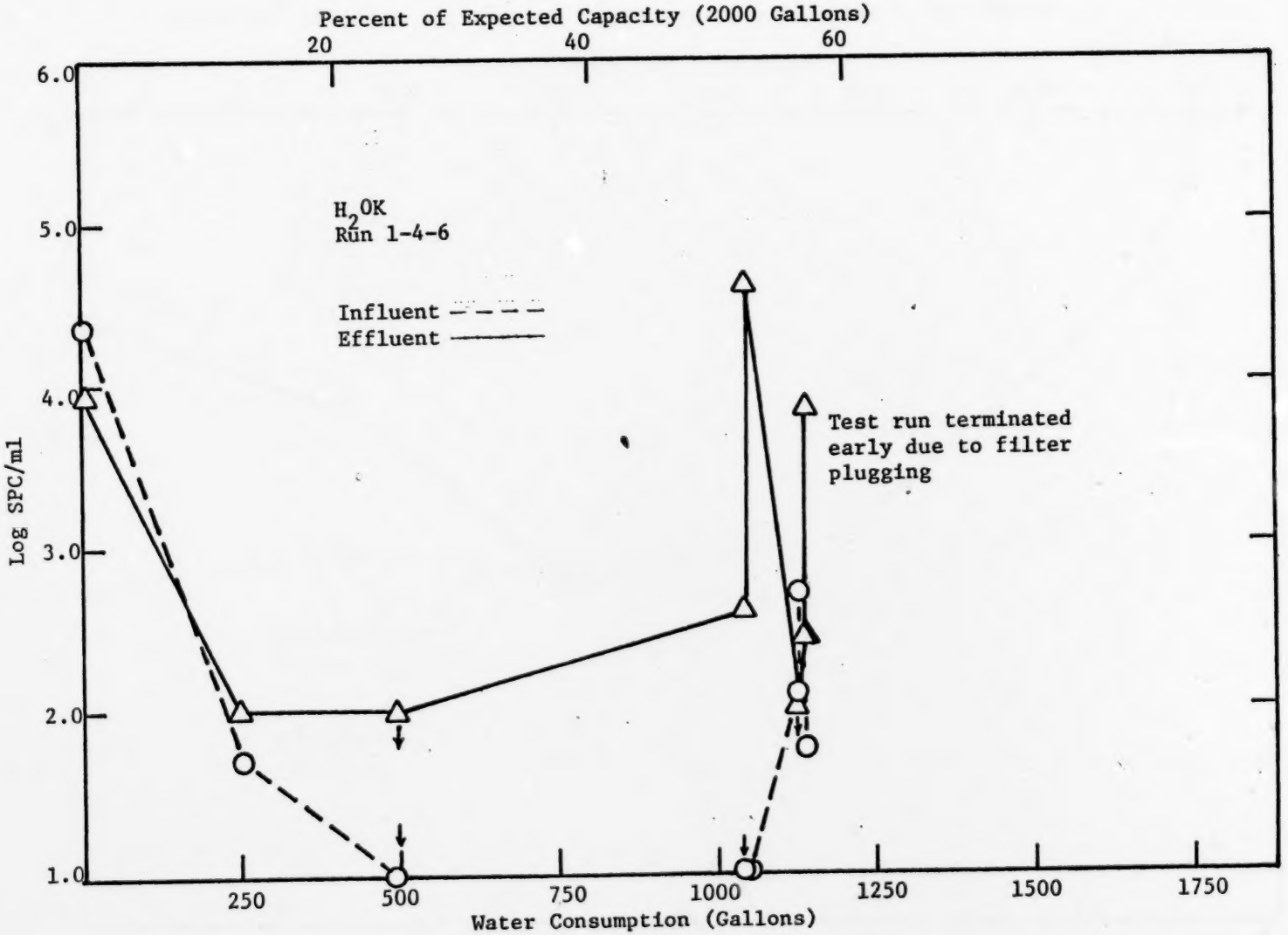

Figure S40 Influent and effluent plate counts versus water consumption.

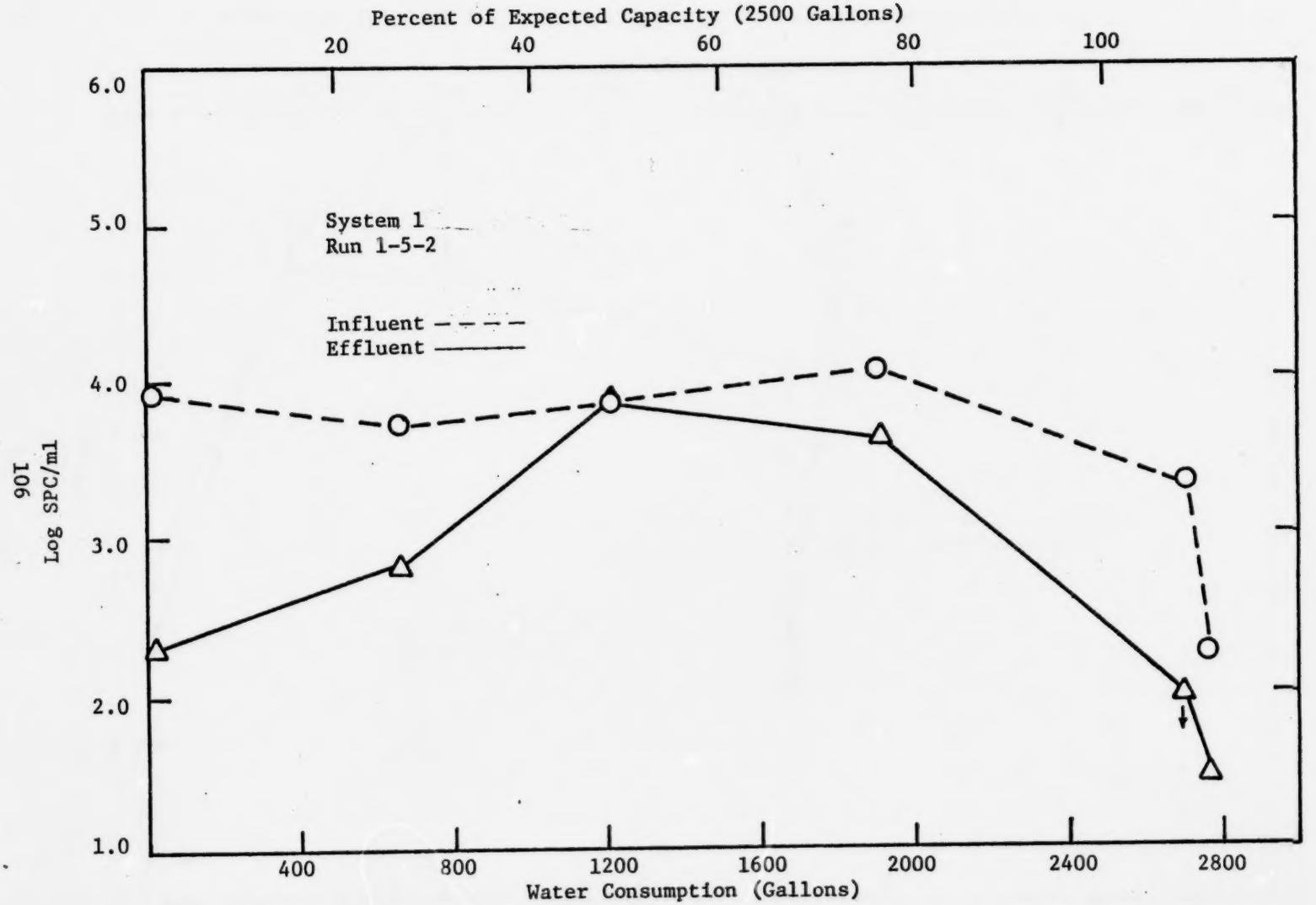

Figure S41. Influent and effluent plate counts versus water consumption.

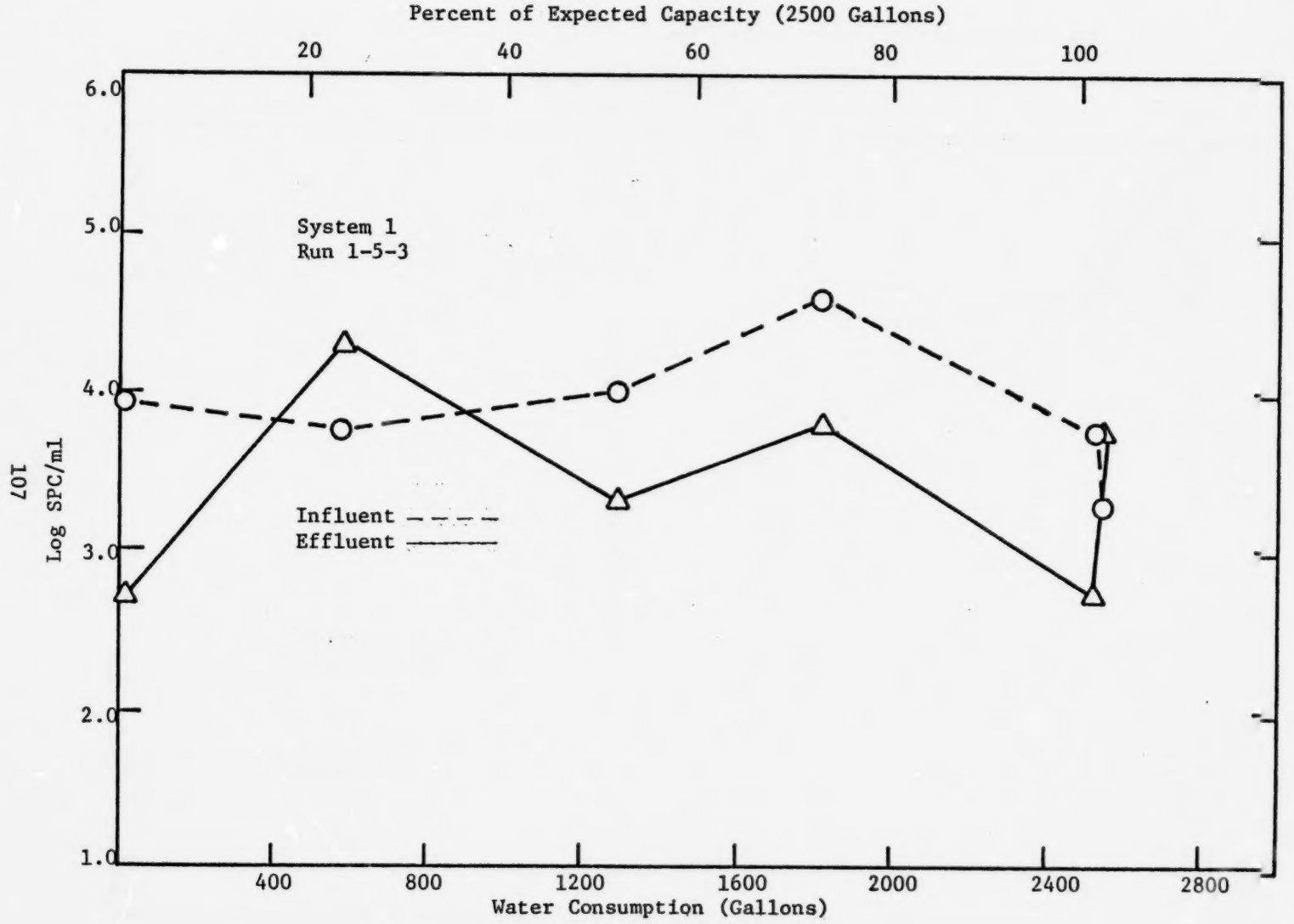

Figure S42. Influent and effluent plate counts versus water consumption.

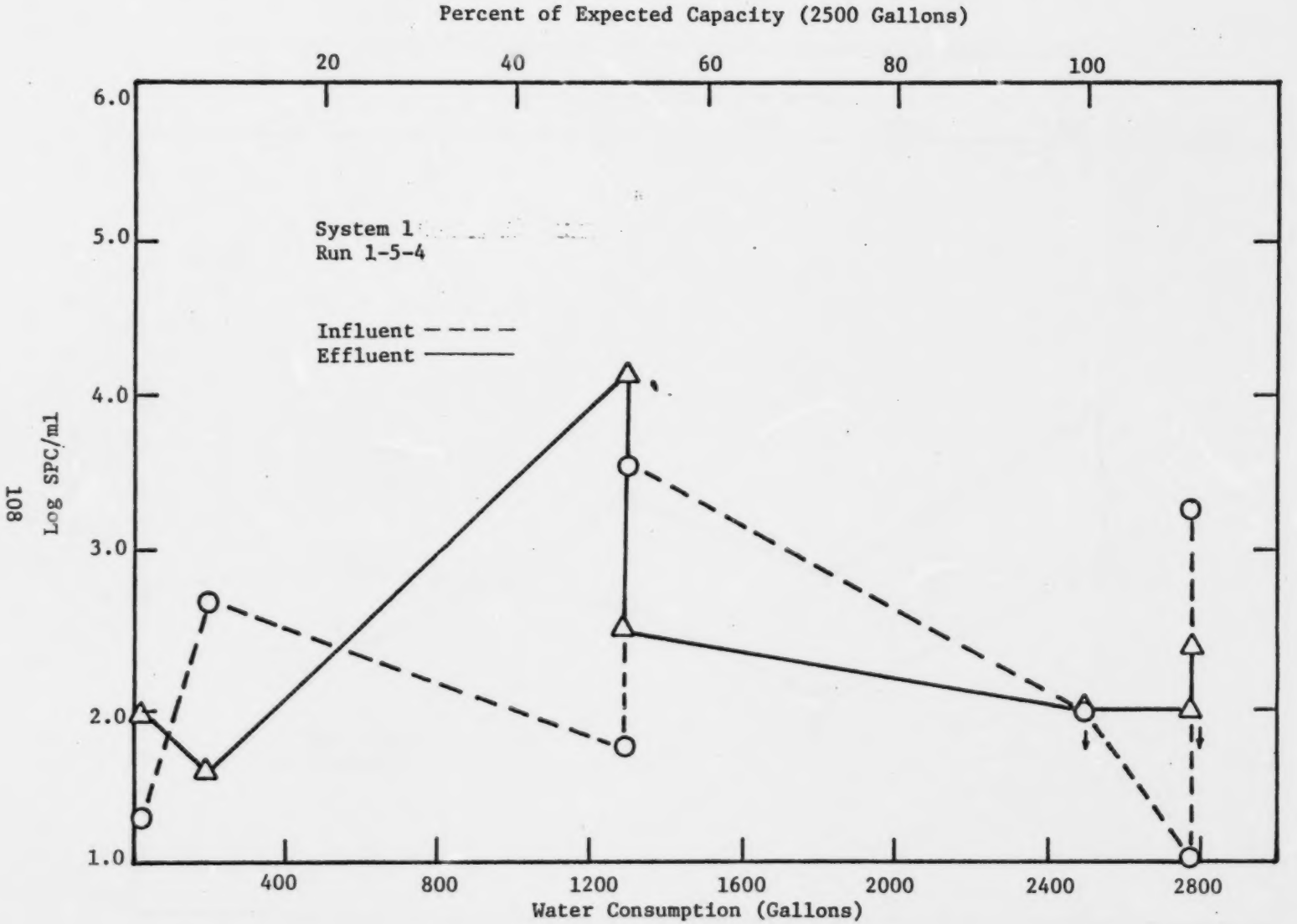

Figure S43. Influent and effluent plate counts versus water consumption.

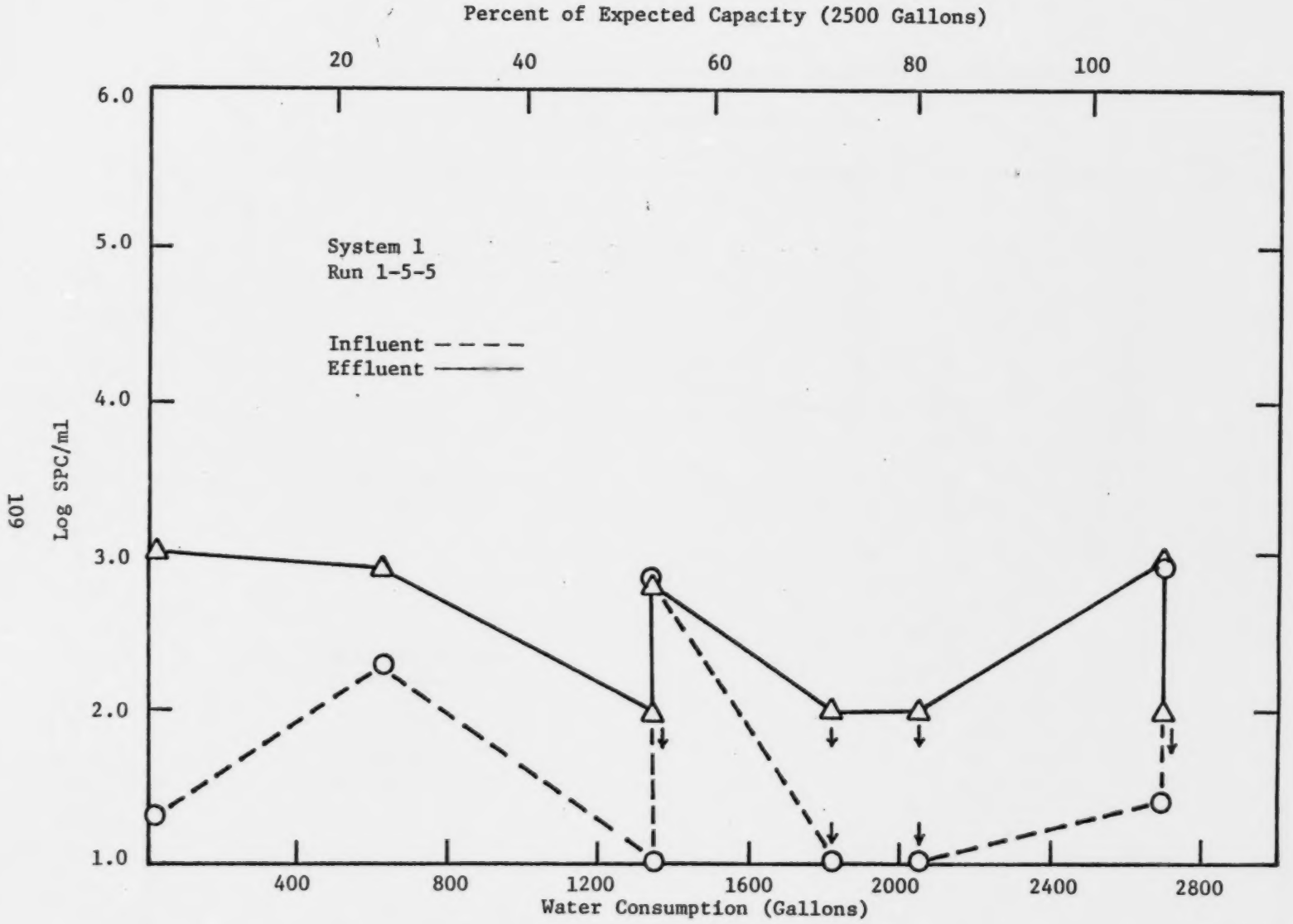

Figure S44. Influent and effluent plate counts versus water consumption.

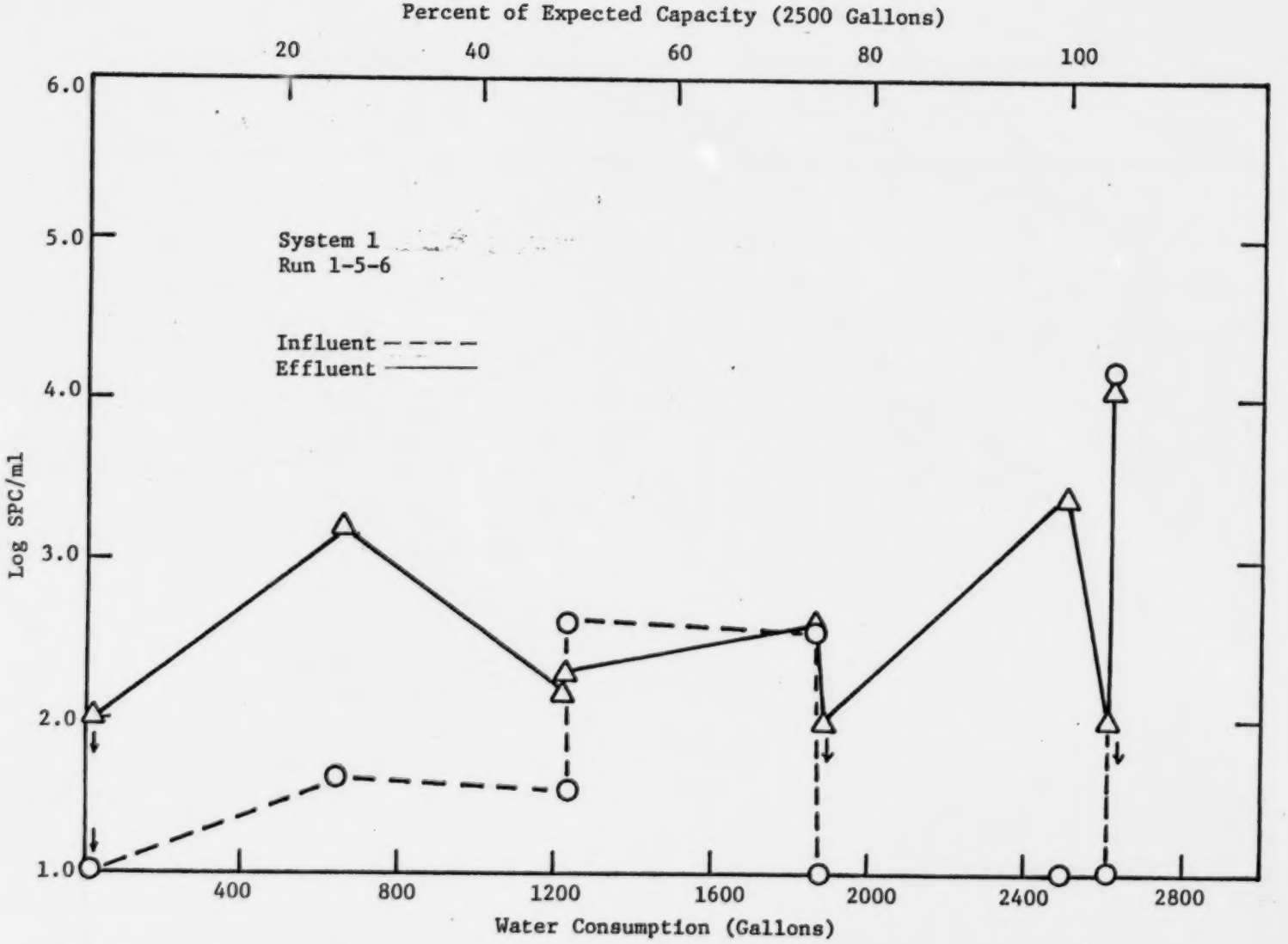

Figure S45. Influent and effluent plate counts versus water consumption.

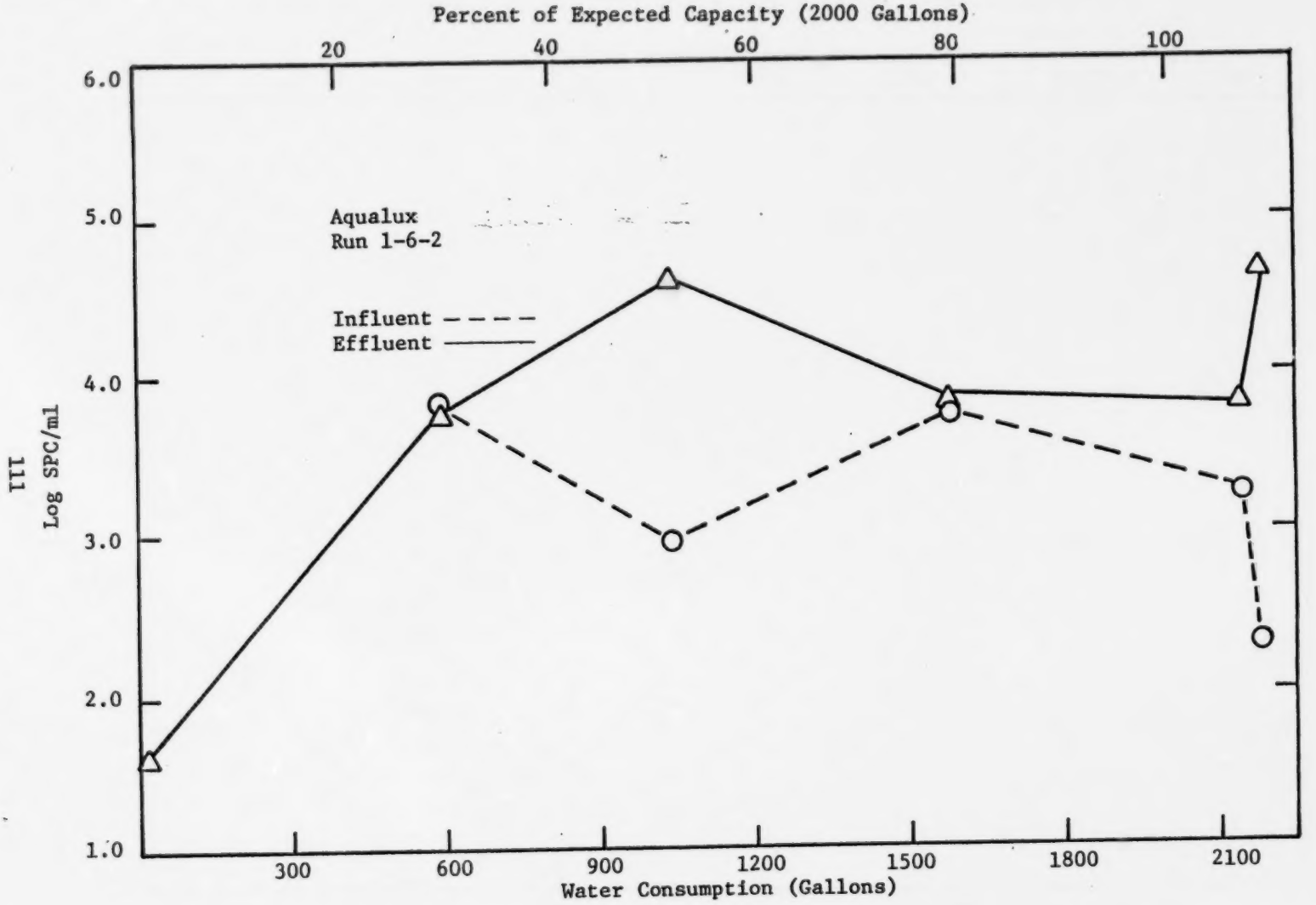

Figure S46. Influent and effluent plate counts versus water consumption.

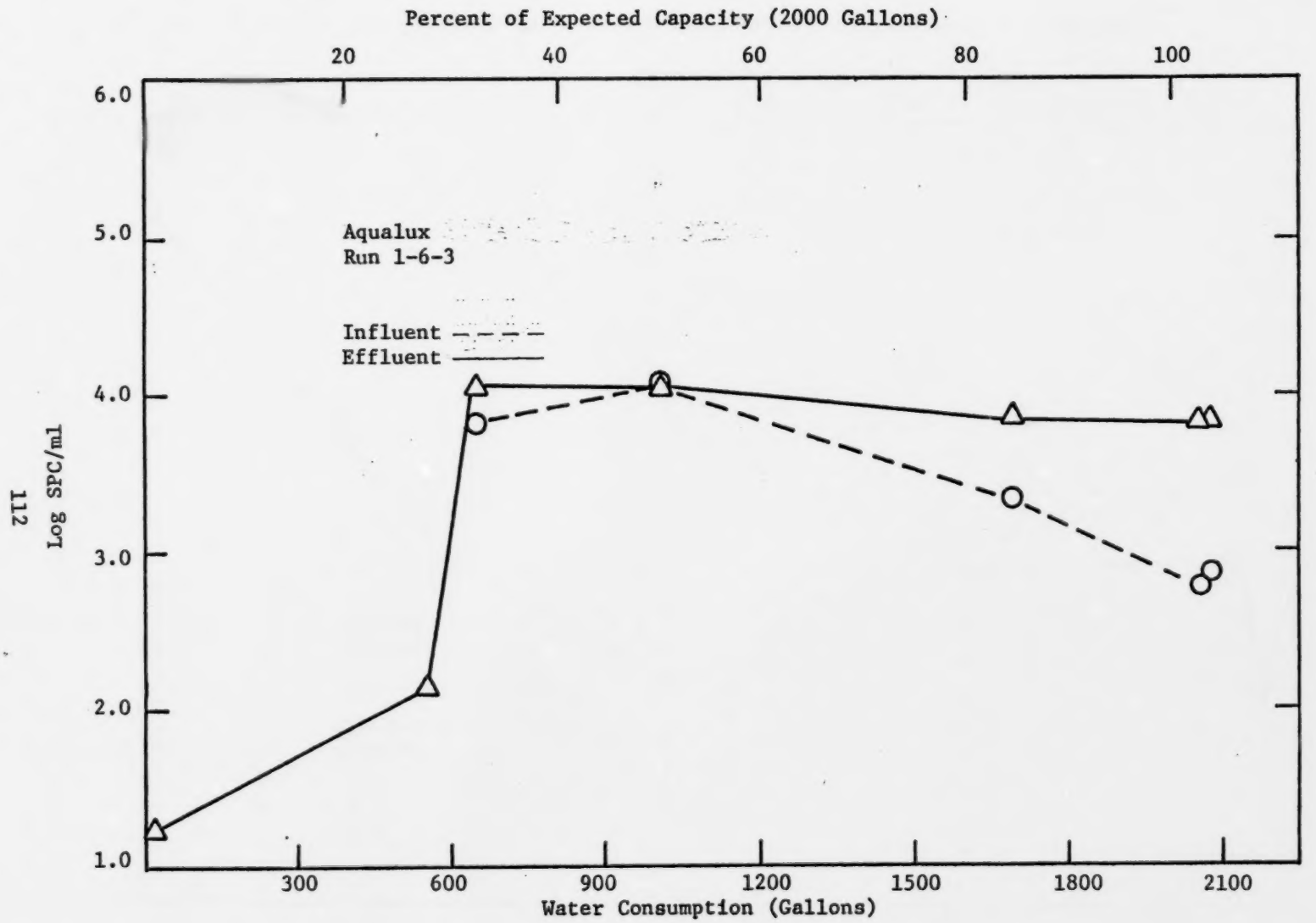

Figure S47. Influent and effluent plate counts versus water consumption.

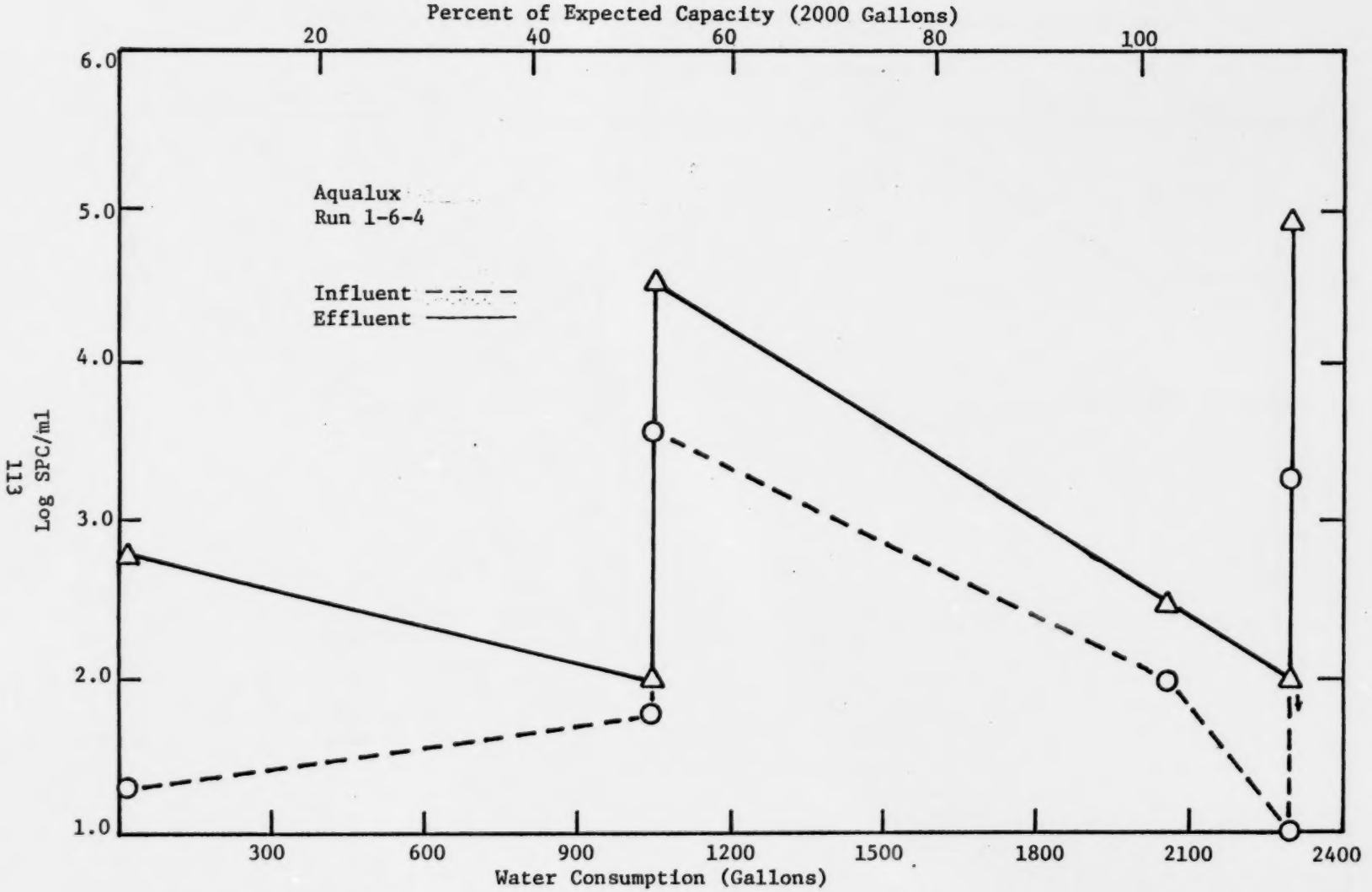

Figure S48. Influent and effluent plate counts versus water consumption.

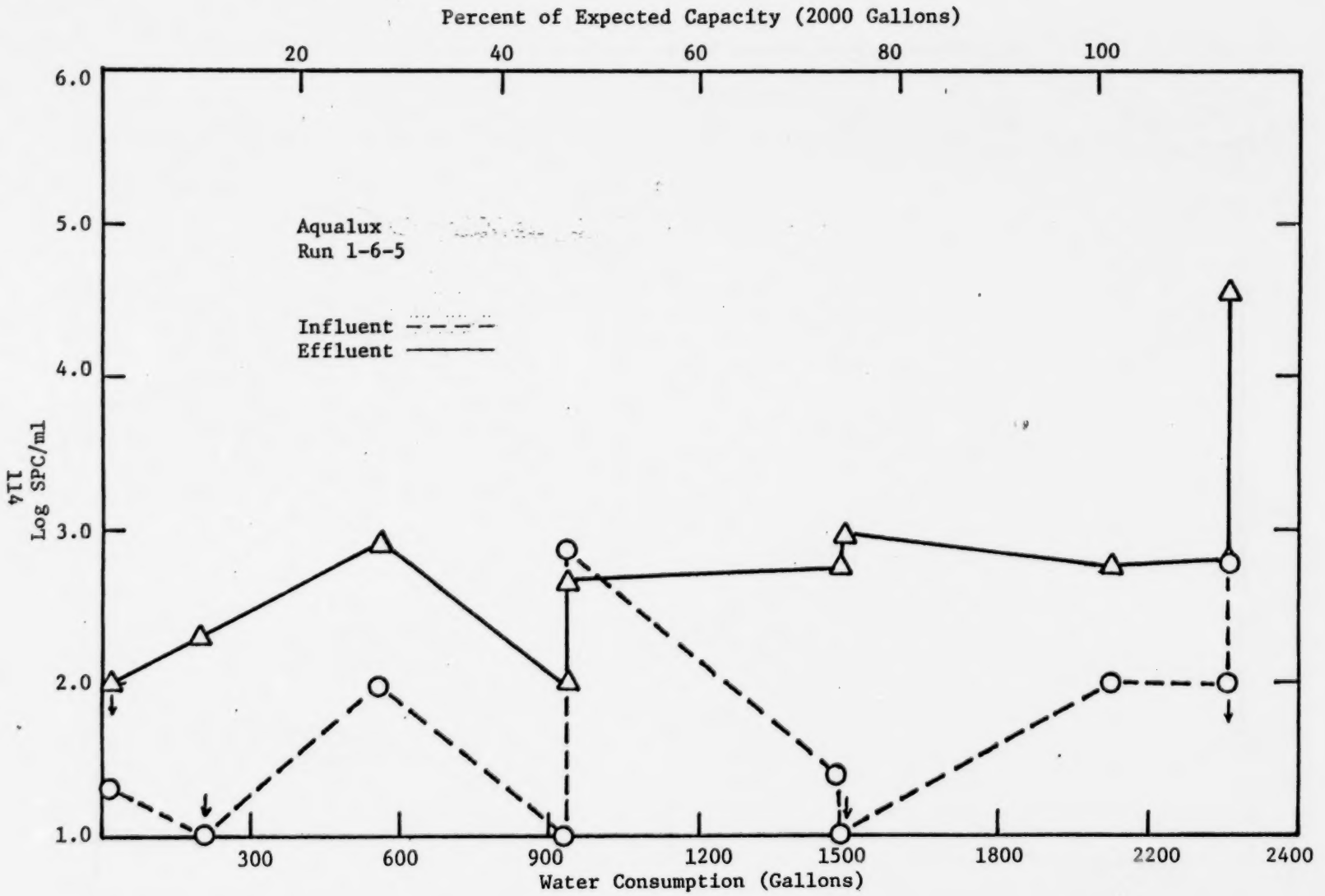

Figure S49. Influent and effluent plate counts versus water consumption.

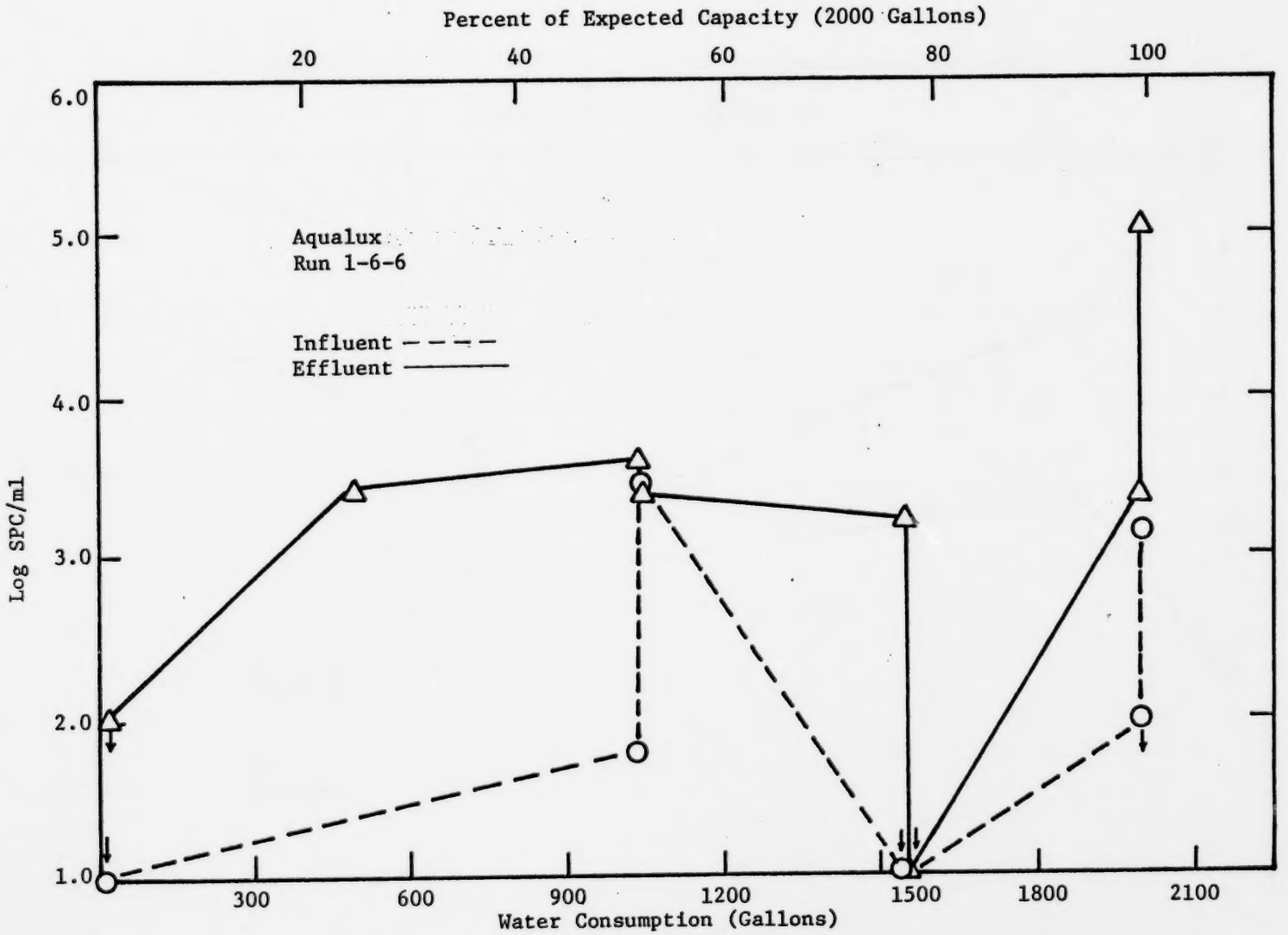

Figure S50. Influent and effluent plate counts versus water consumption.

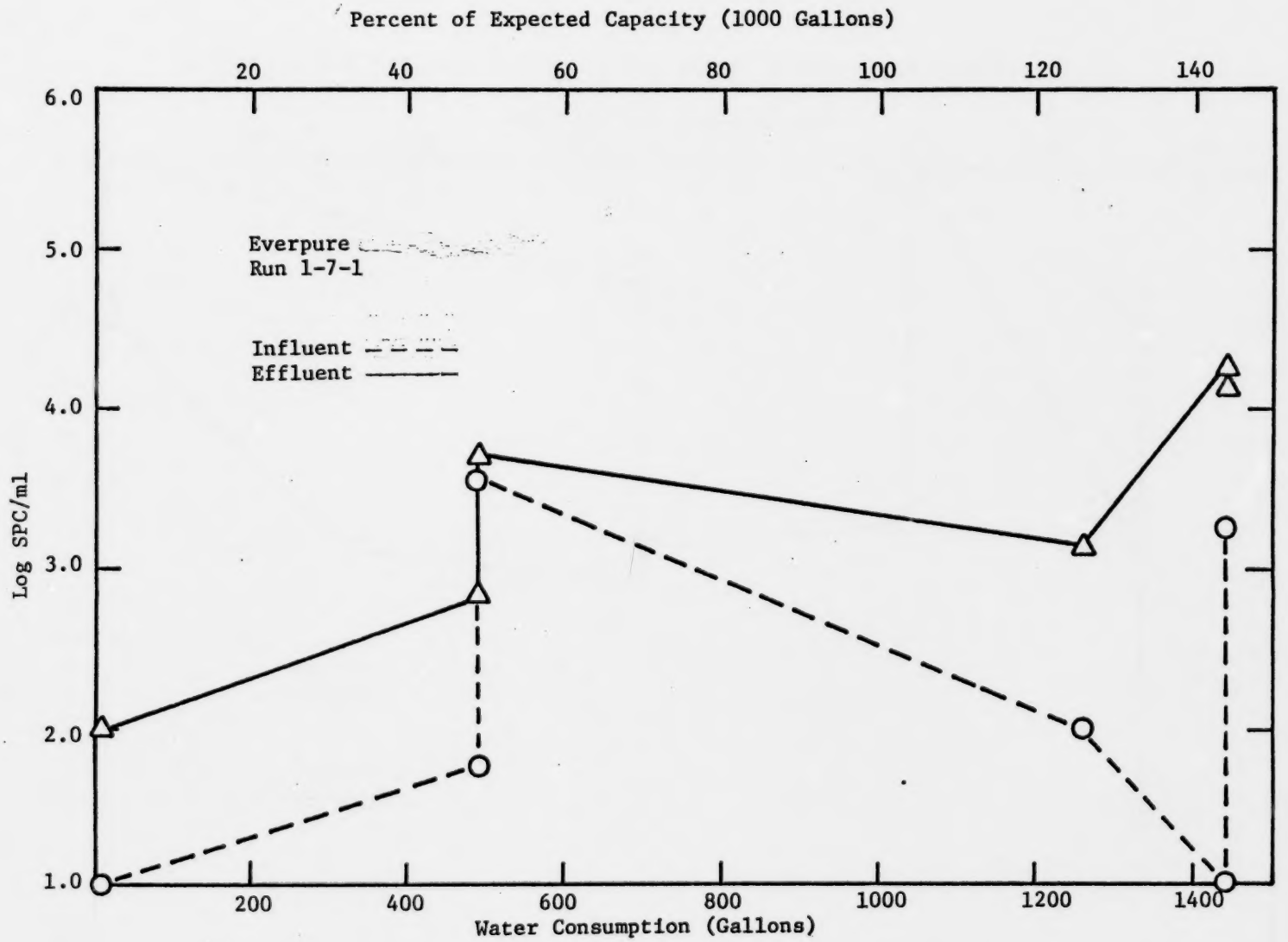

Figure S51. Influent and effluent plate counts versus water consumption.

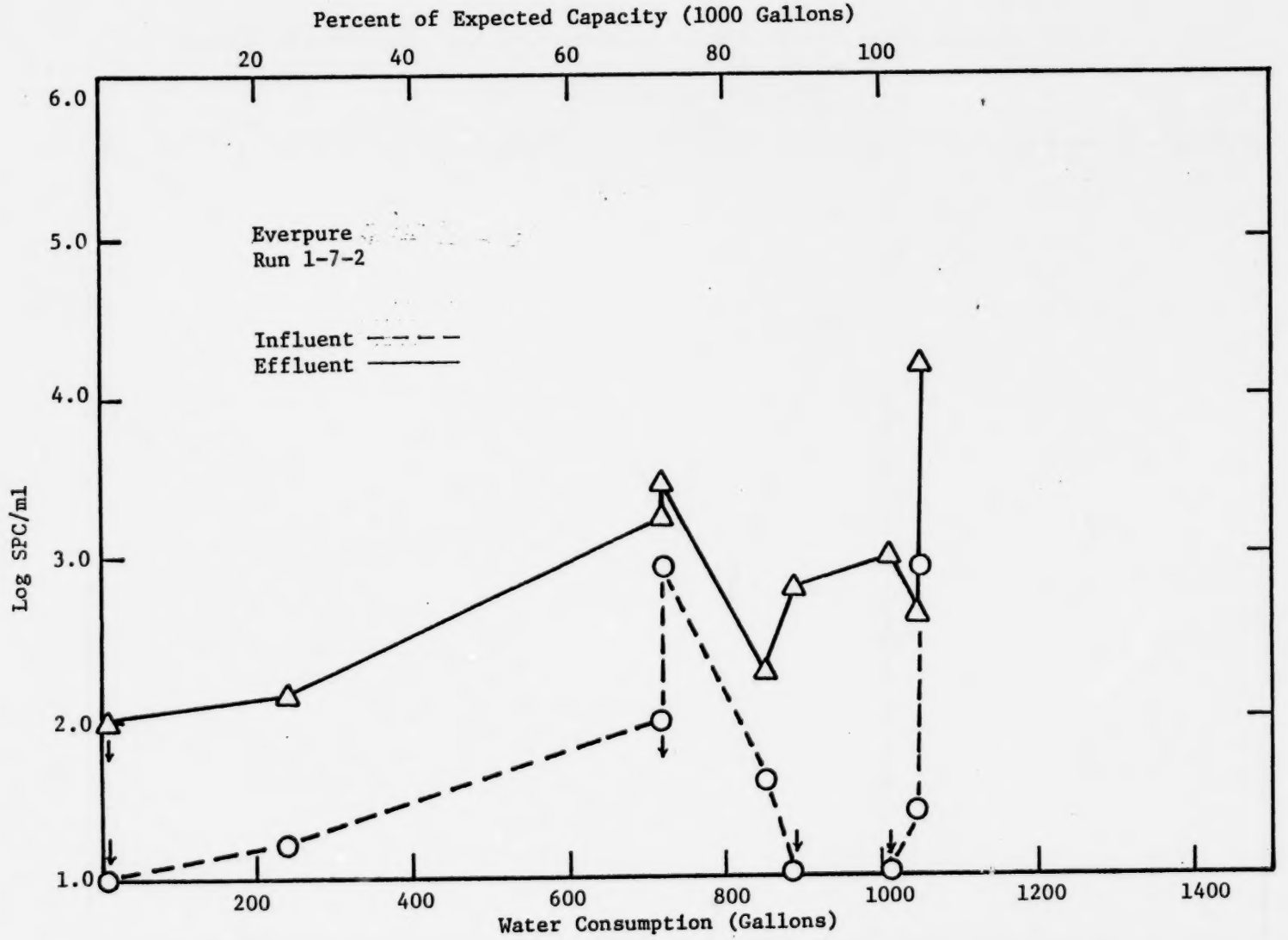

Figure S52. Influent and effluent plate counts versus water consumption.

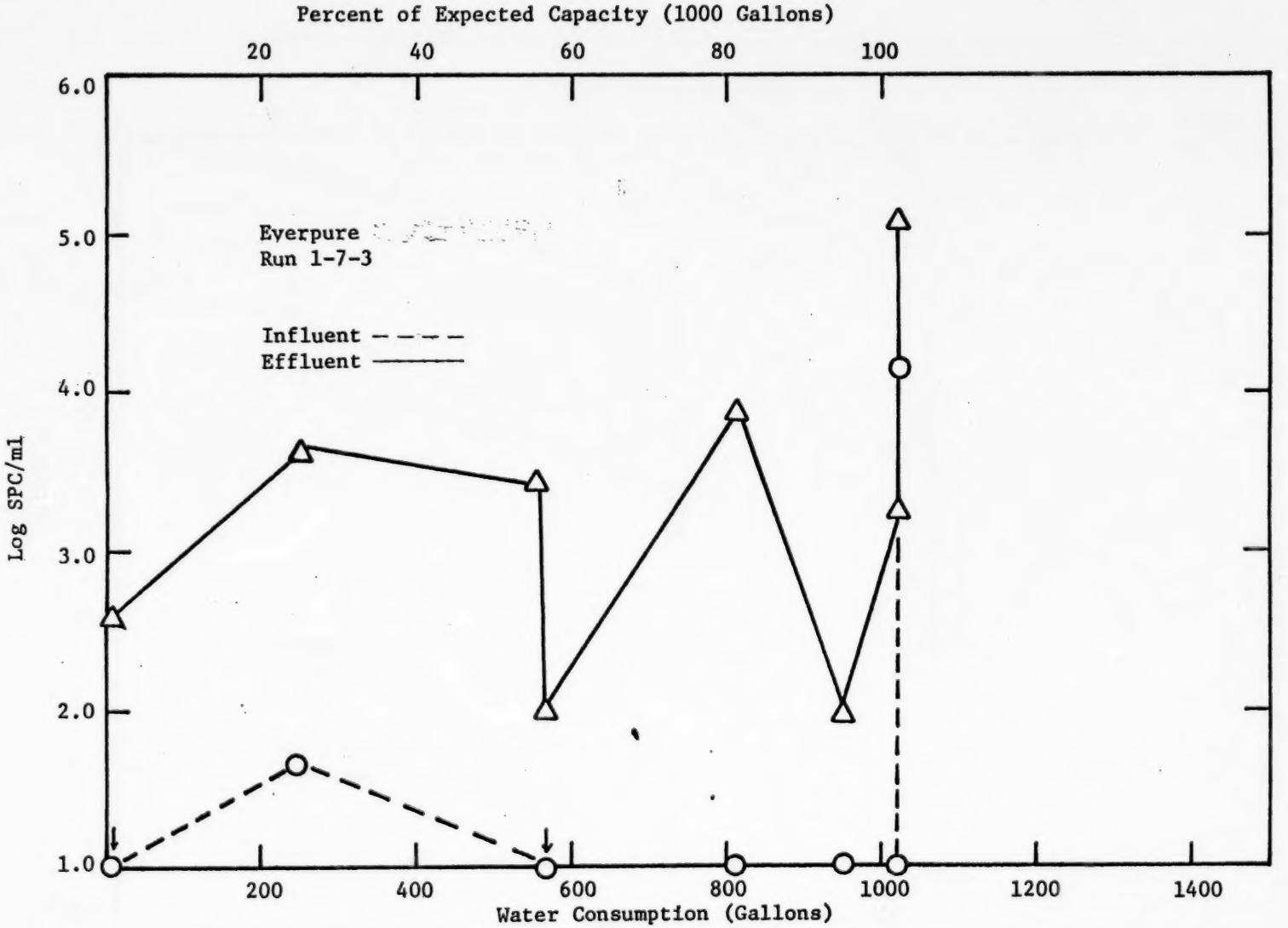

Figure S53. Influent and effluent plate counts versus water consumption.

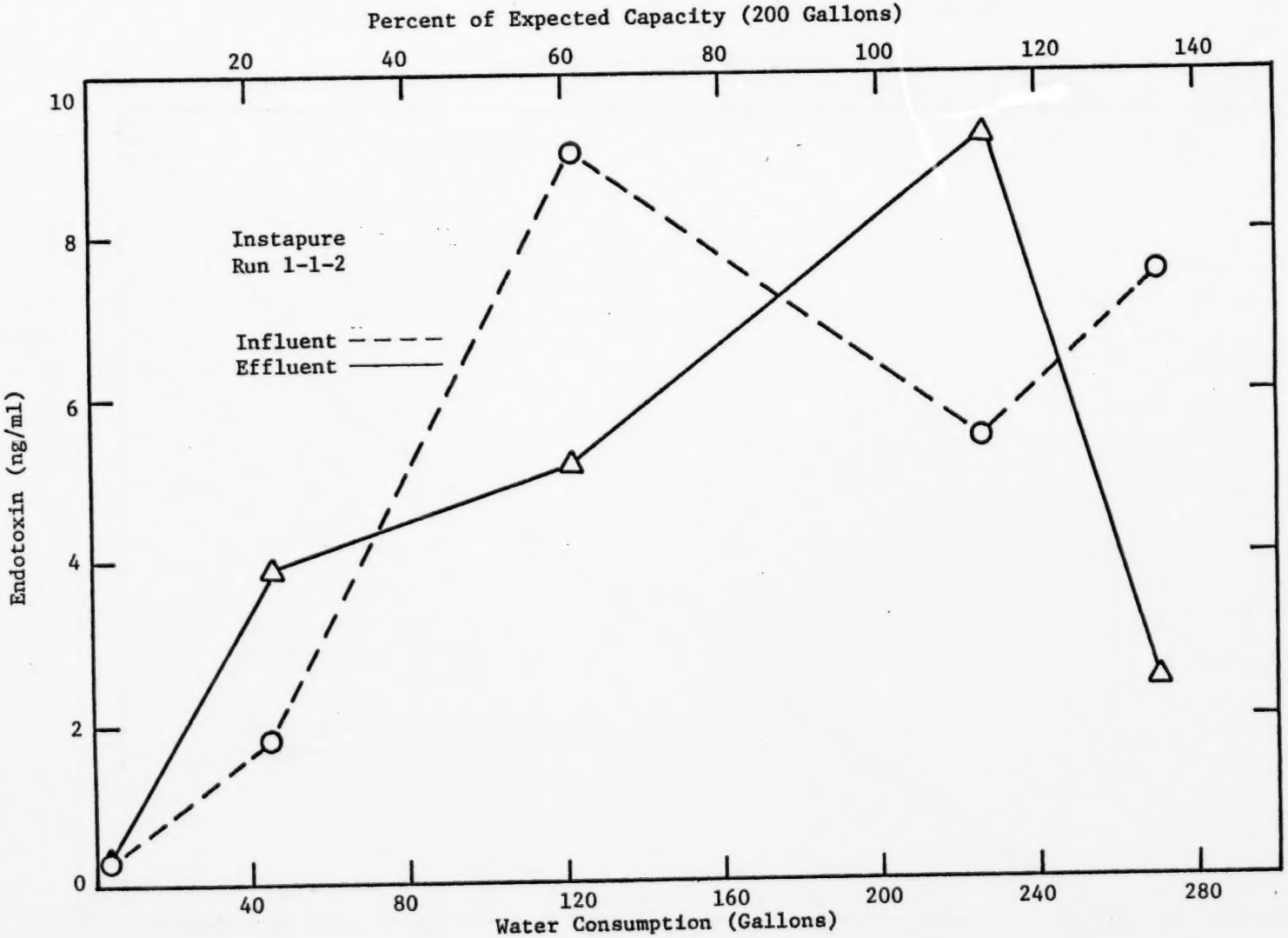

Figure S54. Influent and effluent endotoxin versus water consumption.

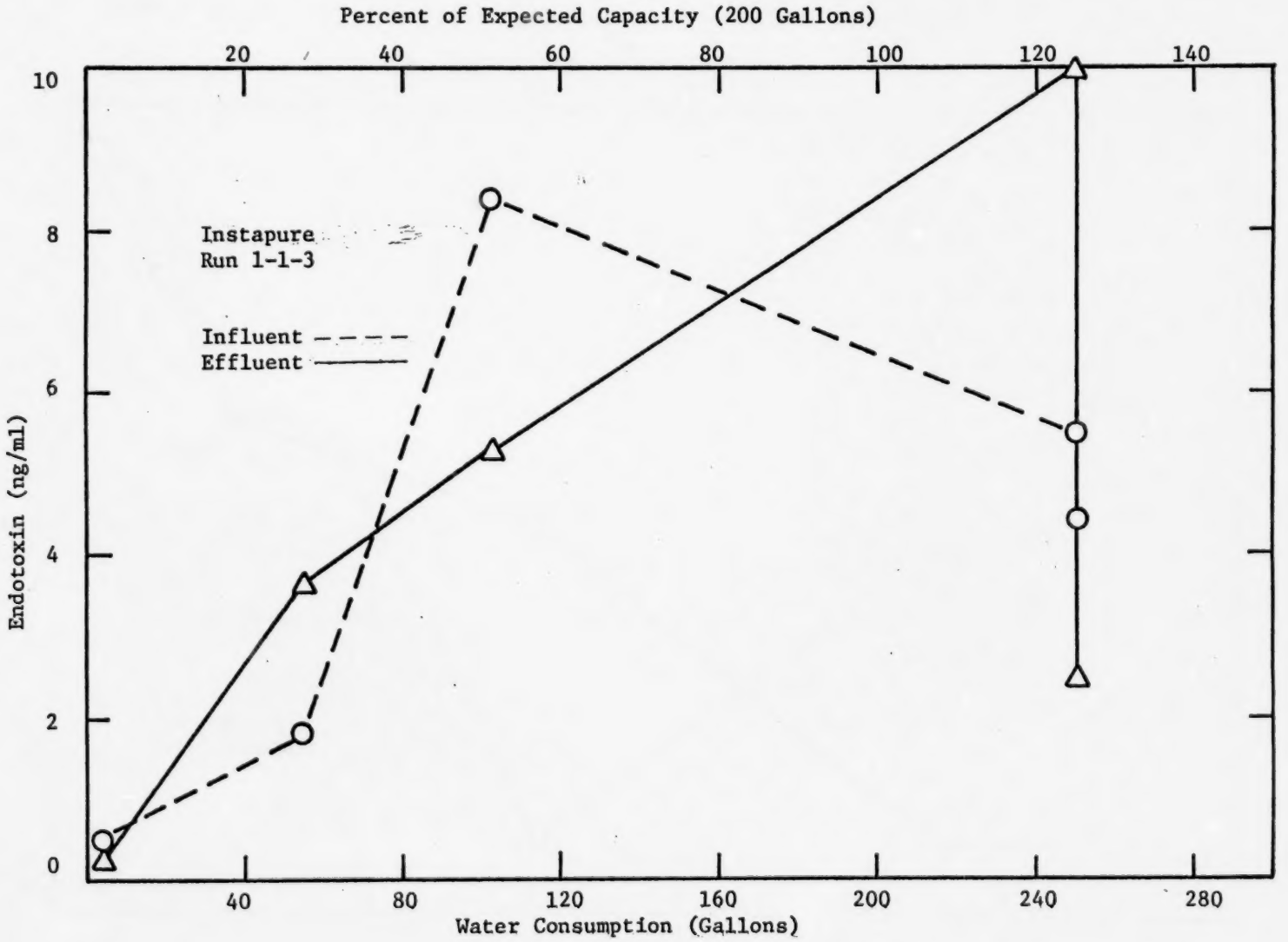

Figure S55. Influent and effluent endotoxin versus water consumption.

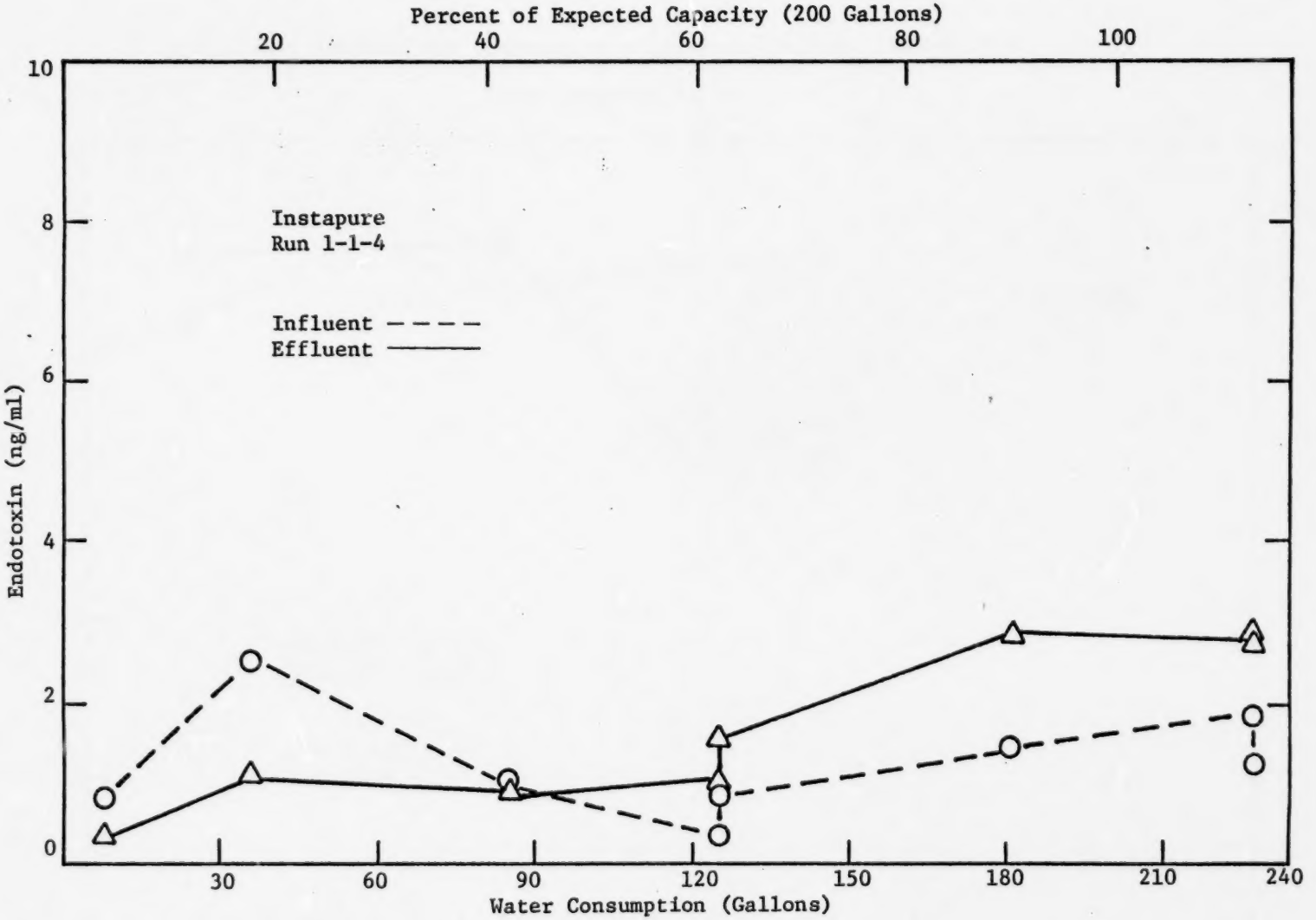

Figure S56. Influent and effluent endotoxin versus water consumption.

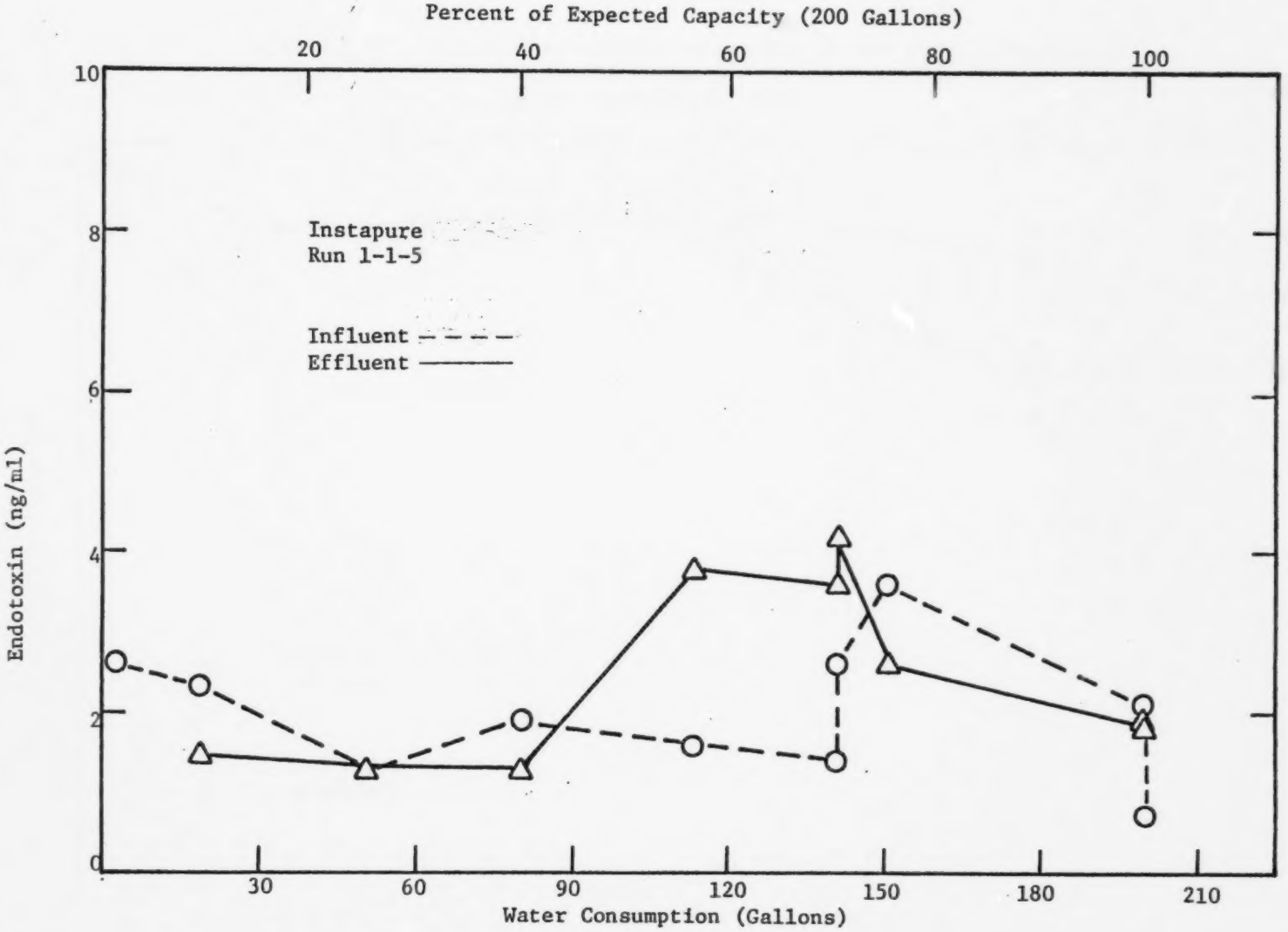

Figure S57. Influent and effluent endotoxin versus water consumption.

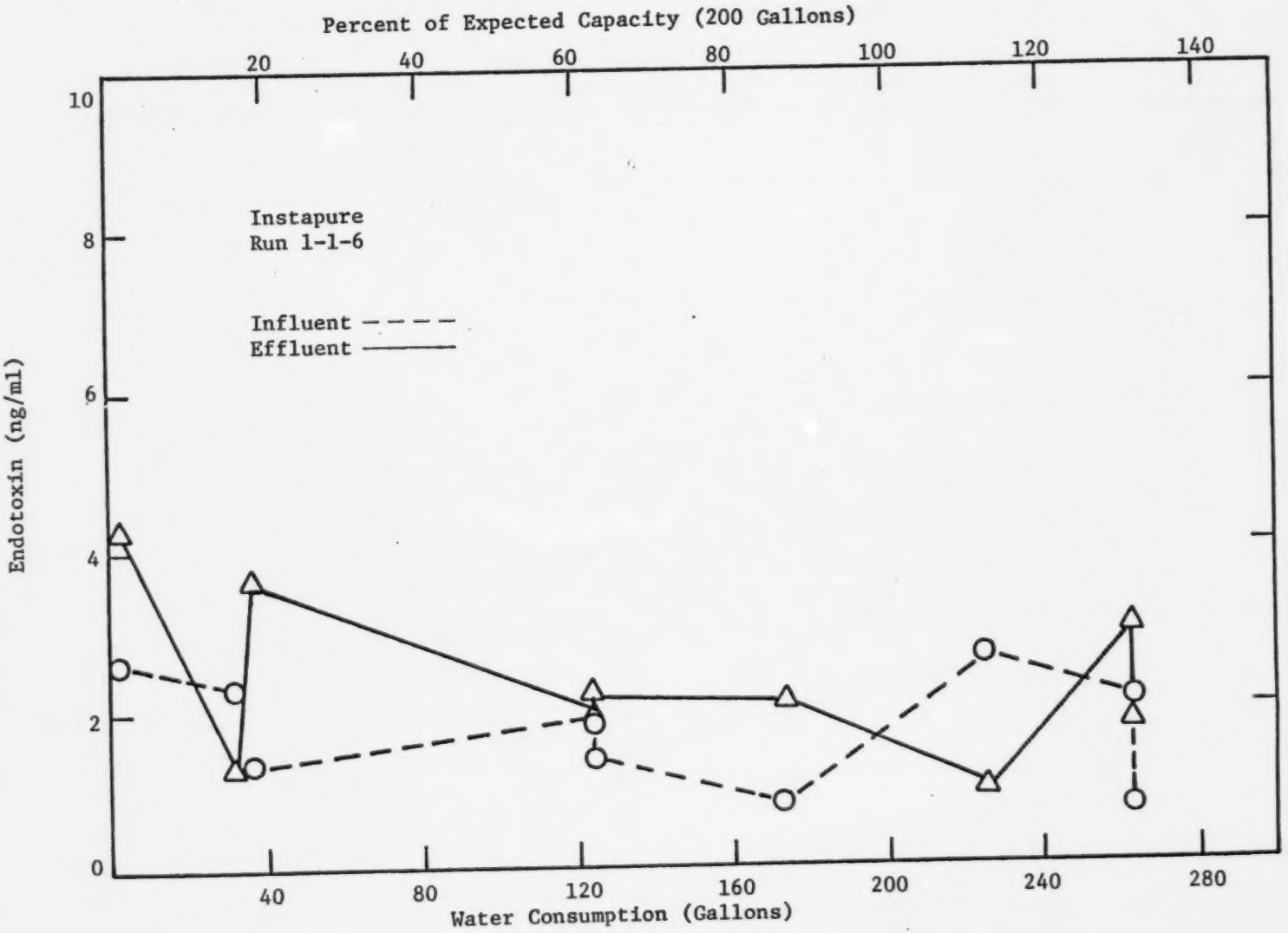

Figure S58. Influent and effluent endotoxin versus water consumption.

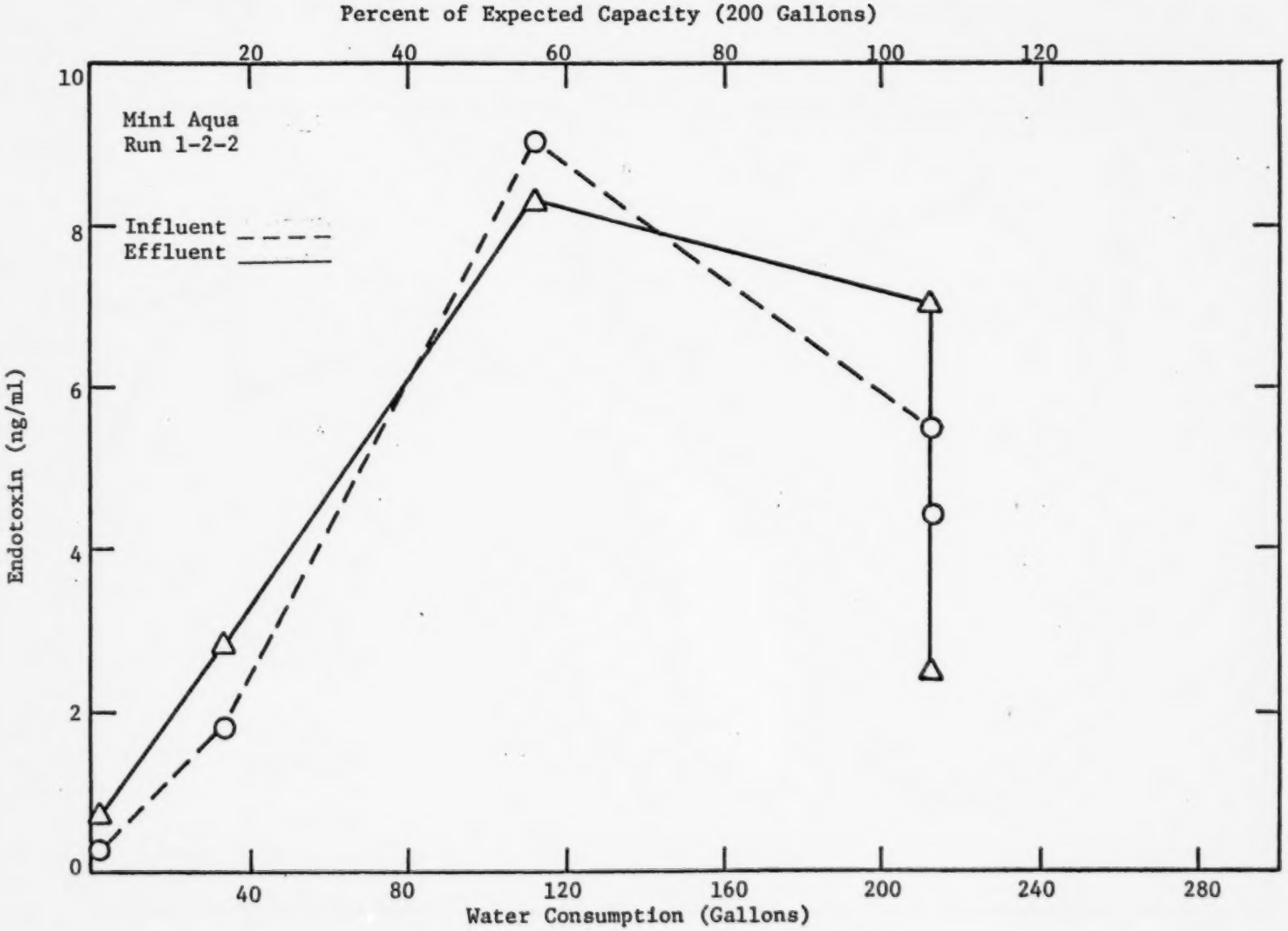

Figure $59. Influent and effluent endotoxin versus water consumption.

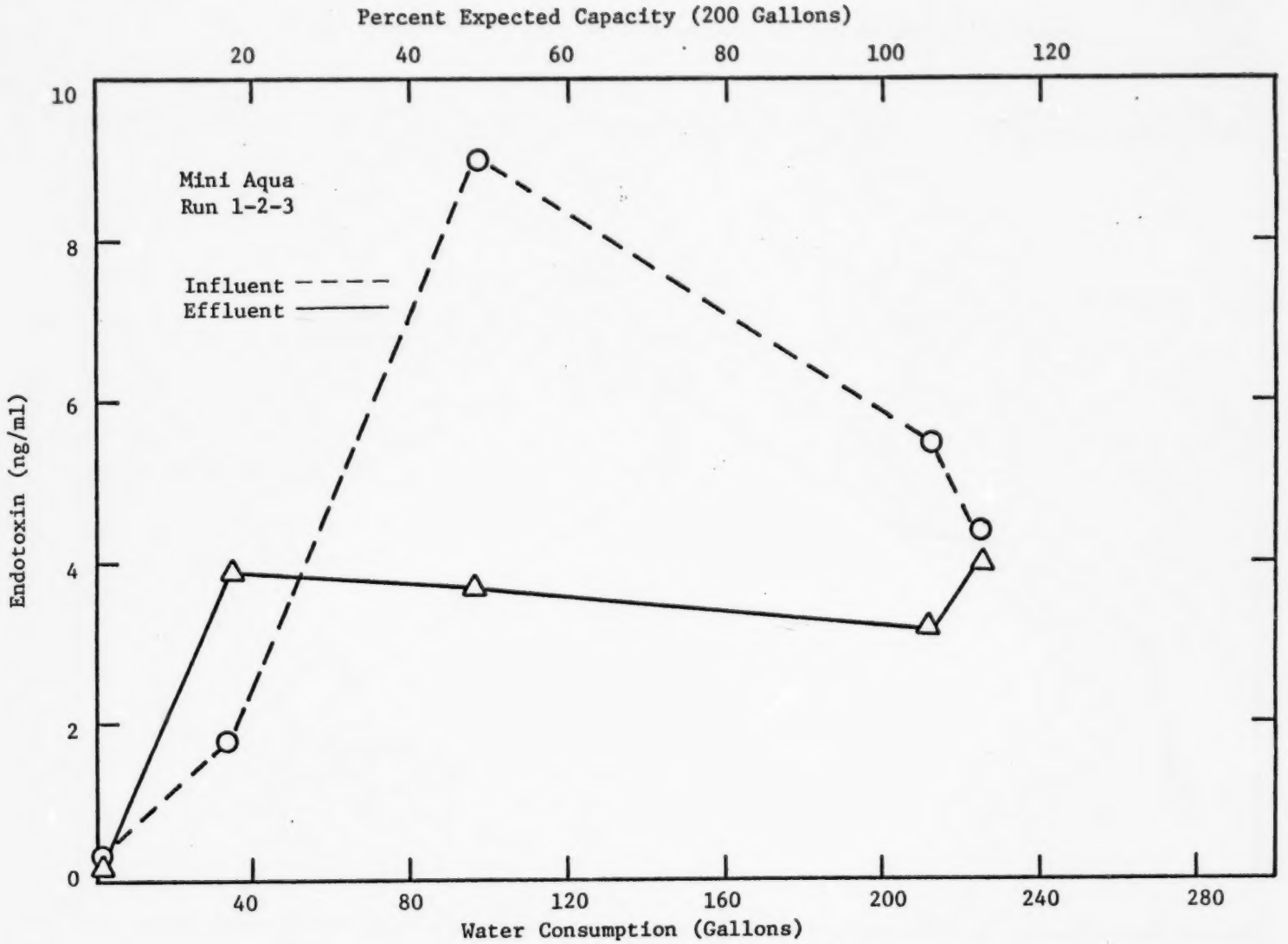

Figure S60. Influent and effluent endotoxin versus water consumption.

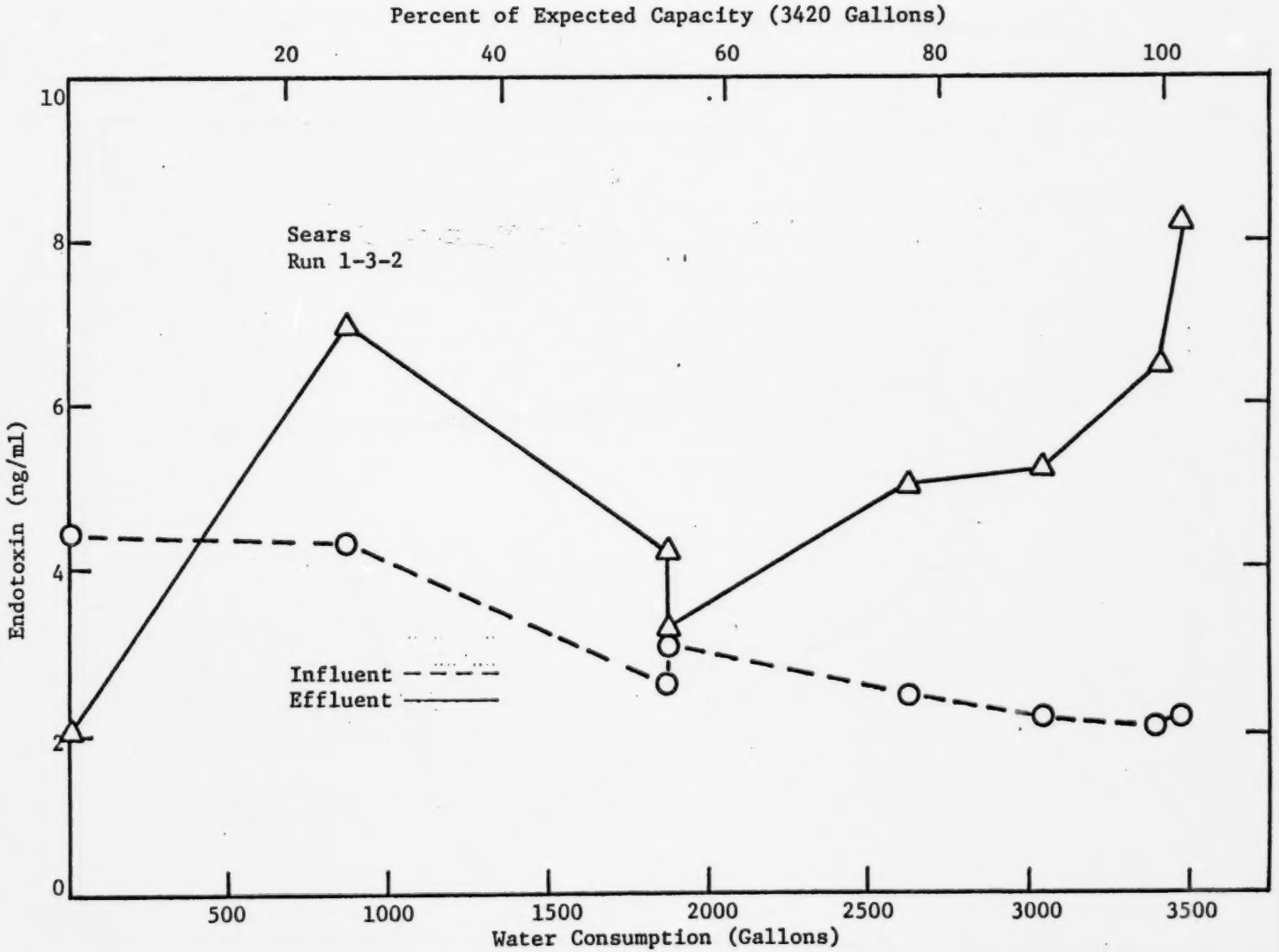

Figure S61. Influent and effluent endotoxin versus water consumption.

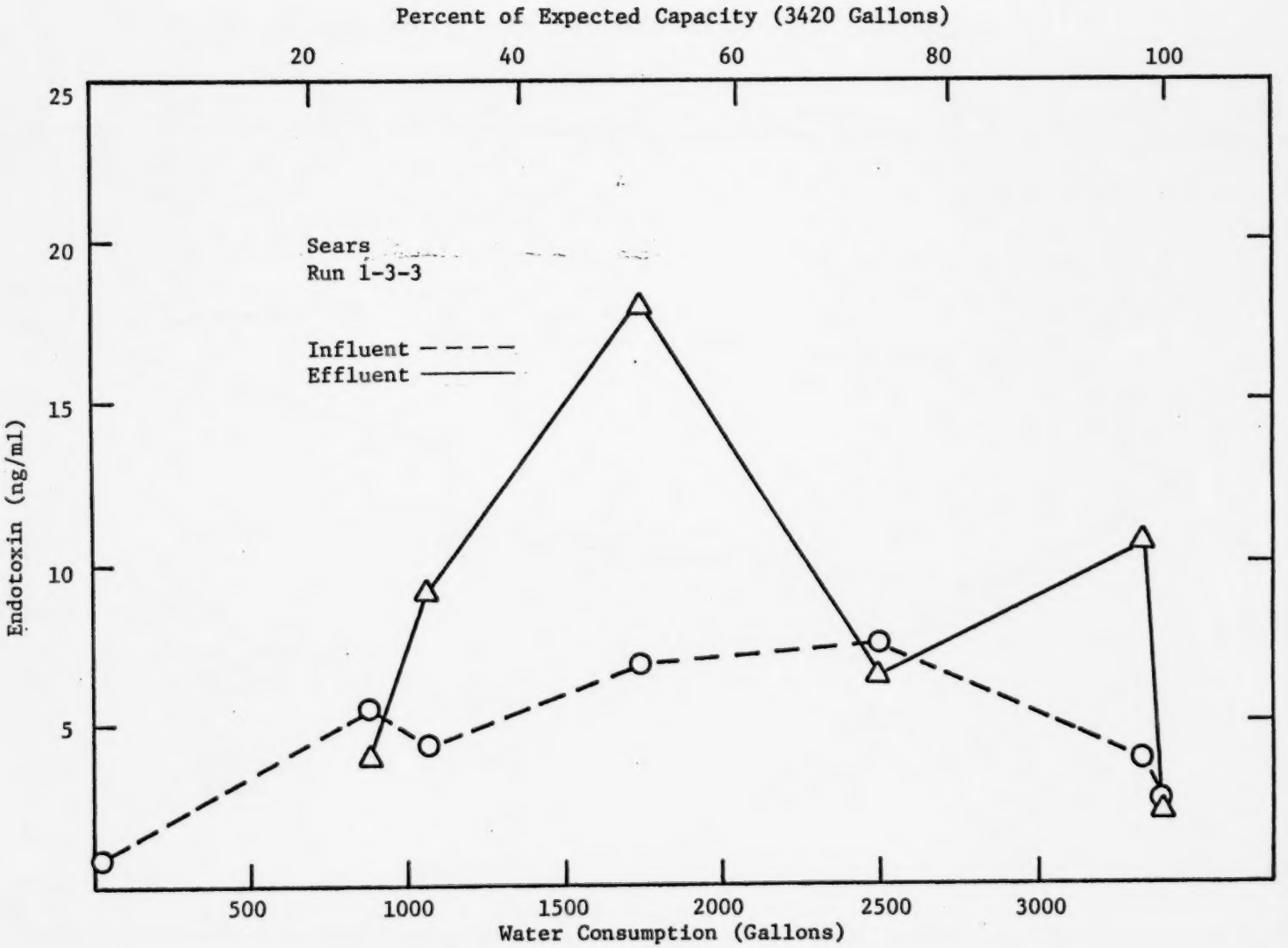

Figure S62. Influent and effluent endotoxin versus water consumption.

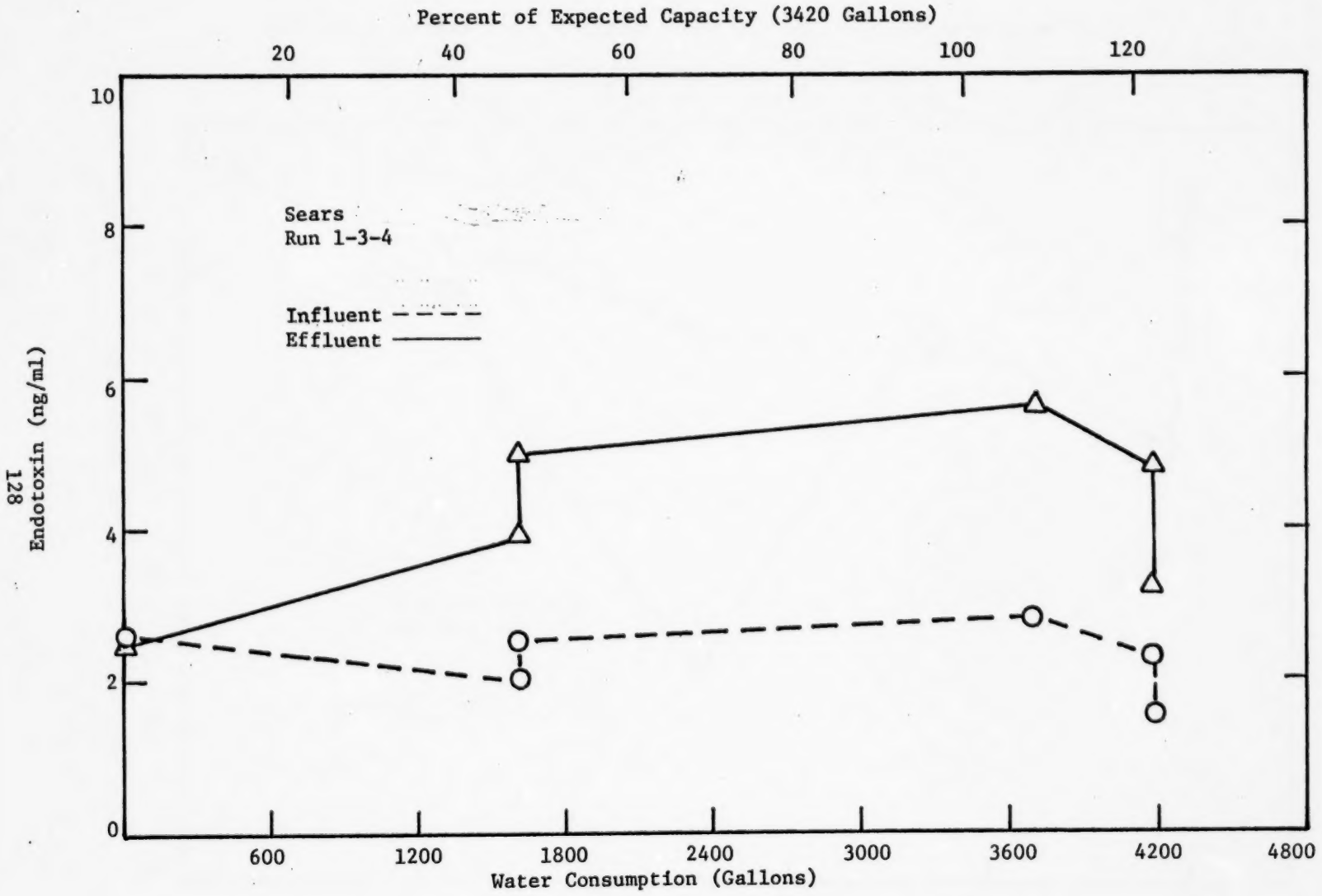

Figure S63. Influent and effluent endotoxin versus water consumption.

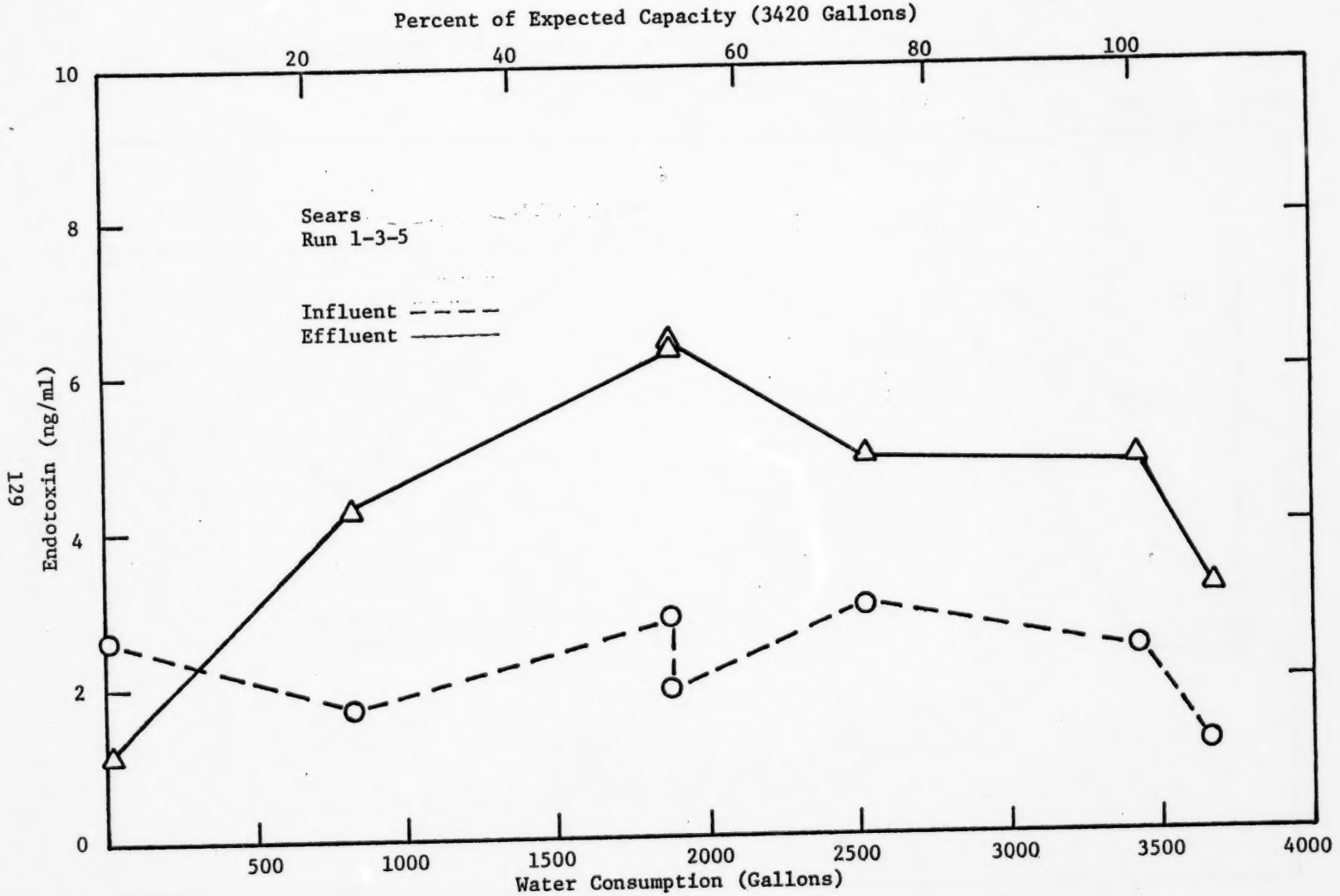

Figure S64. Influent and effluent endotoxin versus water consumption.

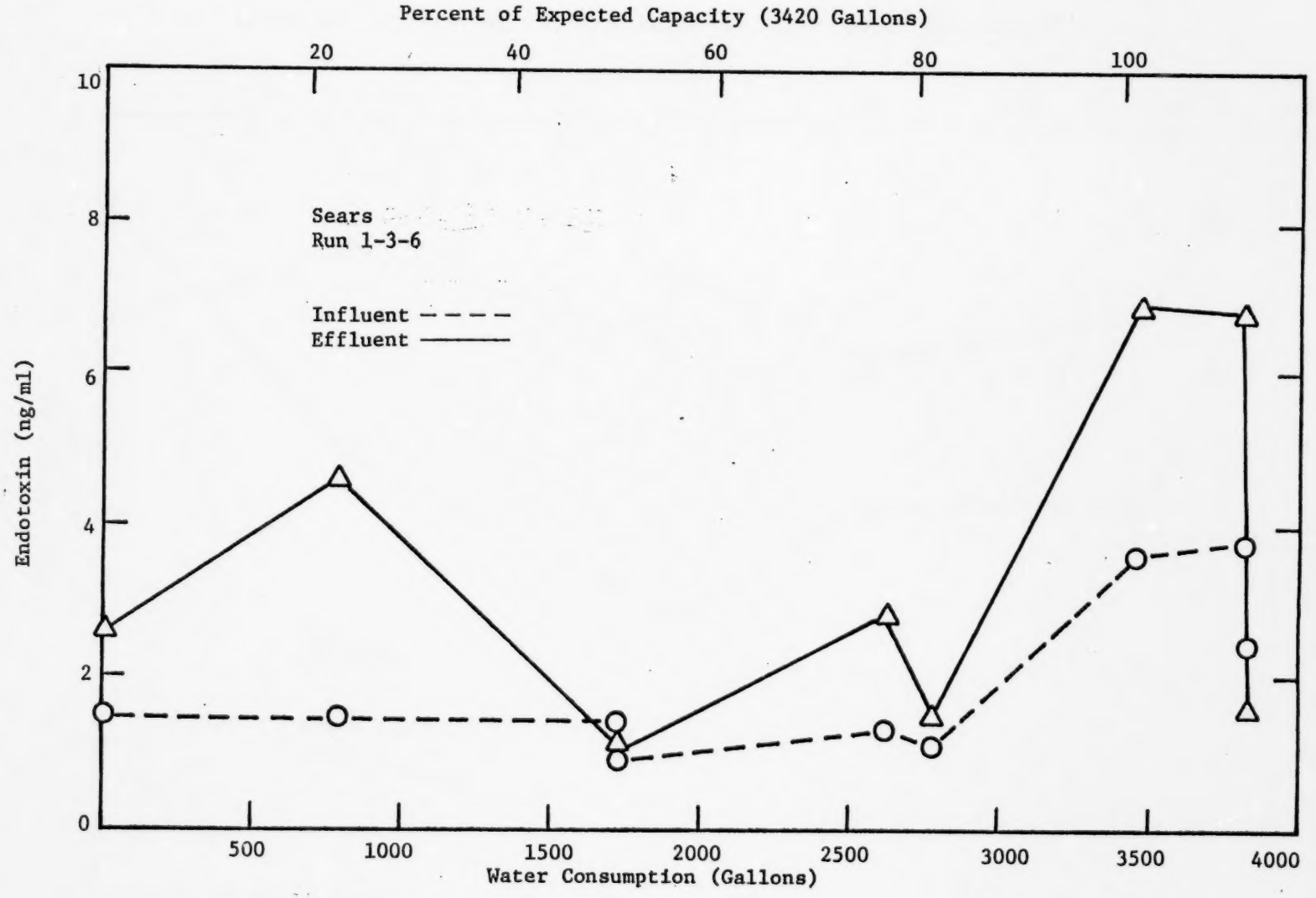

Figure S65. Influent and effluent endotoxin versus water consumption.

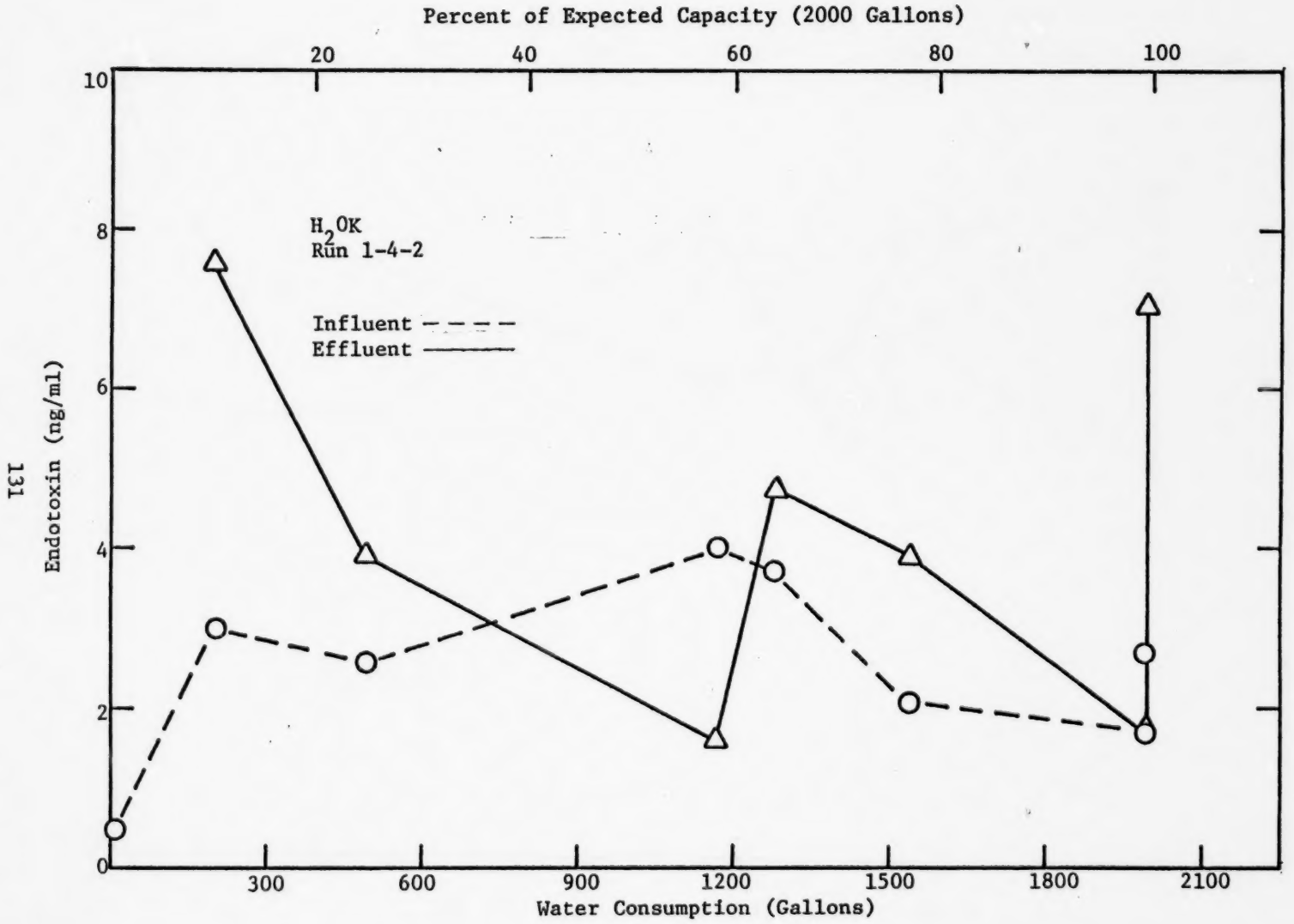

Figure S66. Influent and effluent endotoxin concentration versus water consumption.

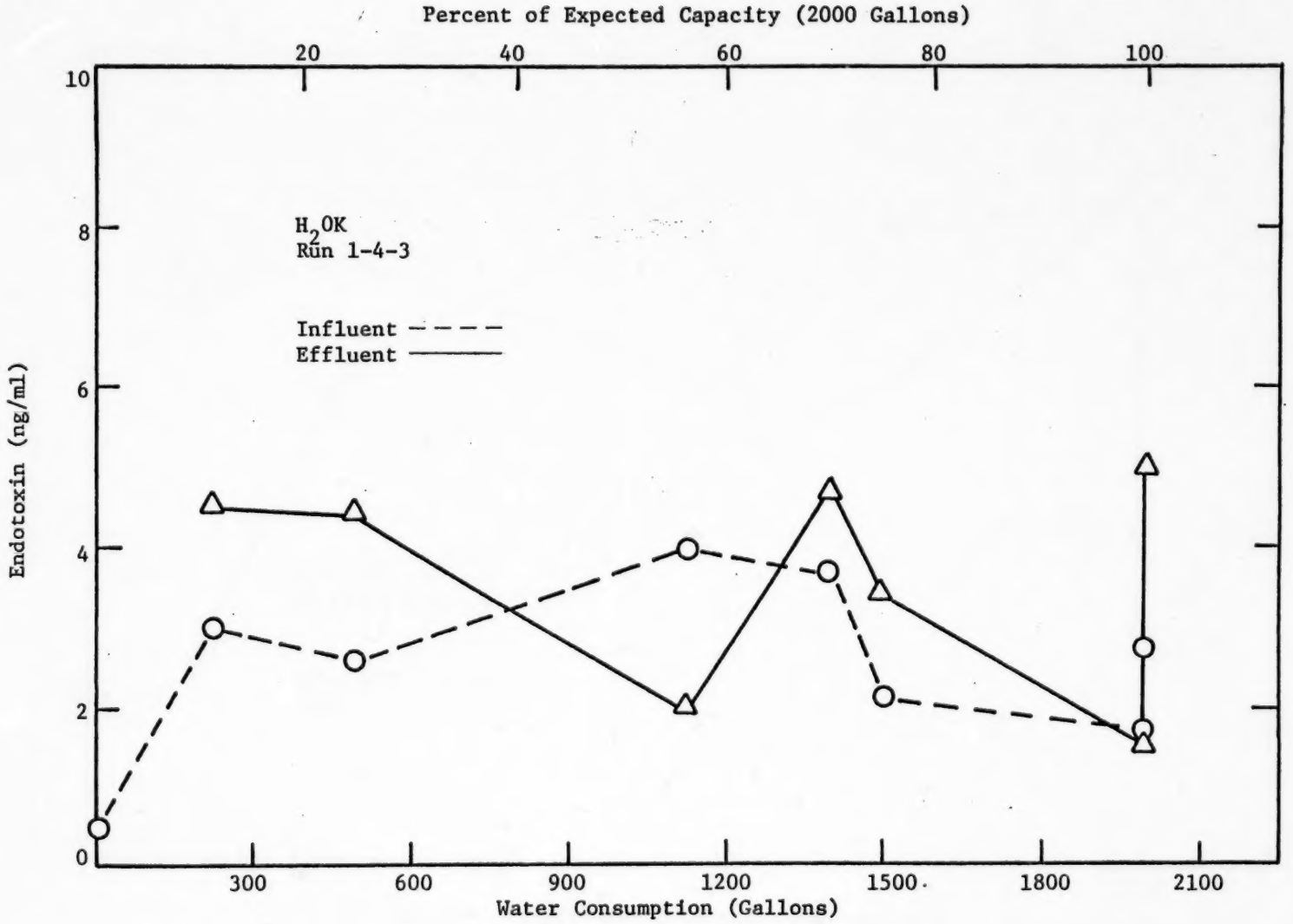

Figure S67. Influent and effluent endotoxin concentration versus water consumption.

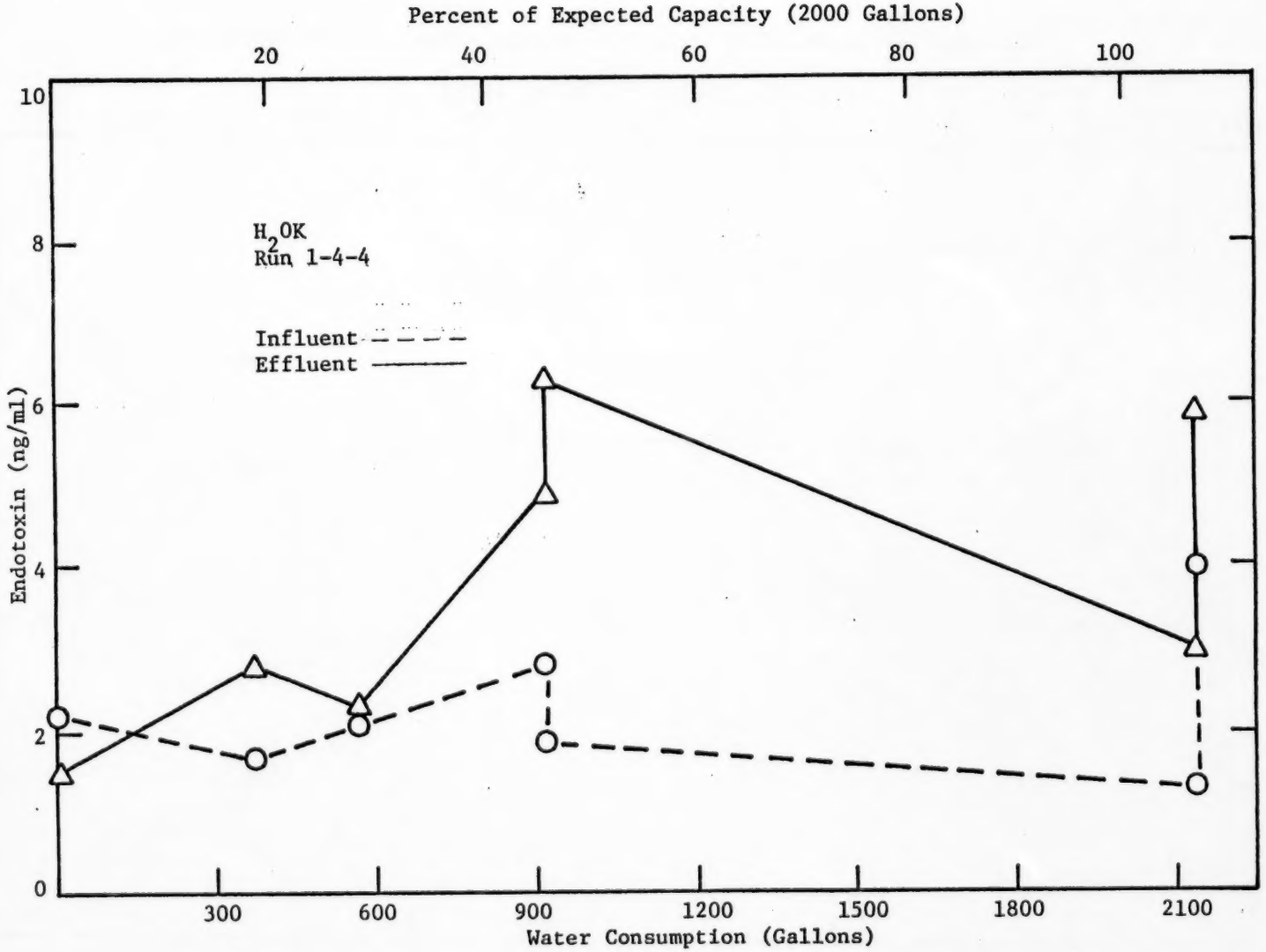

Figure S68. Influent and effluent endotoxin versus water consumption.

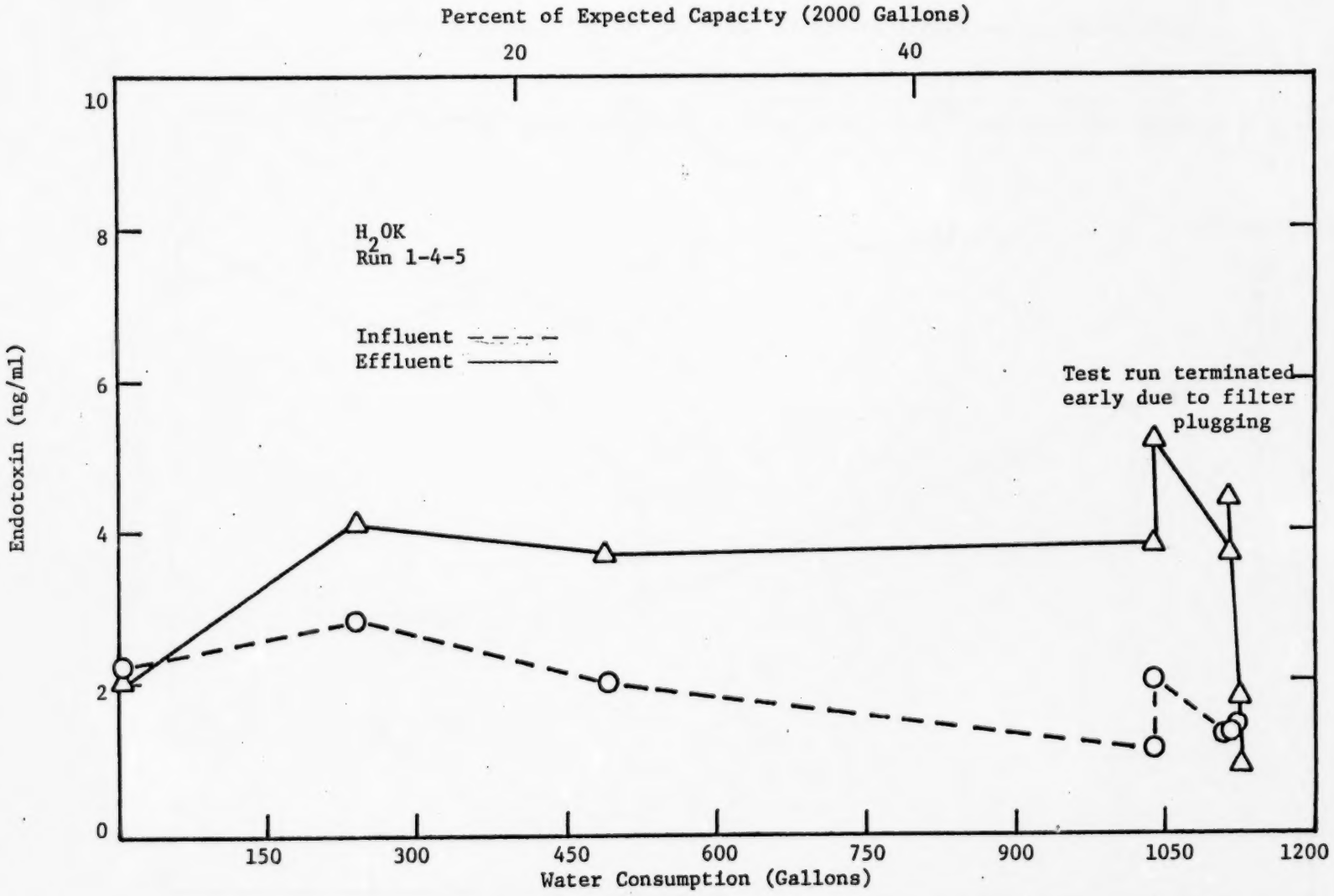

Figure S69. Influent and effluent endotoxin versus water consumption.

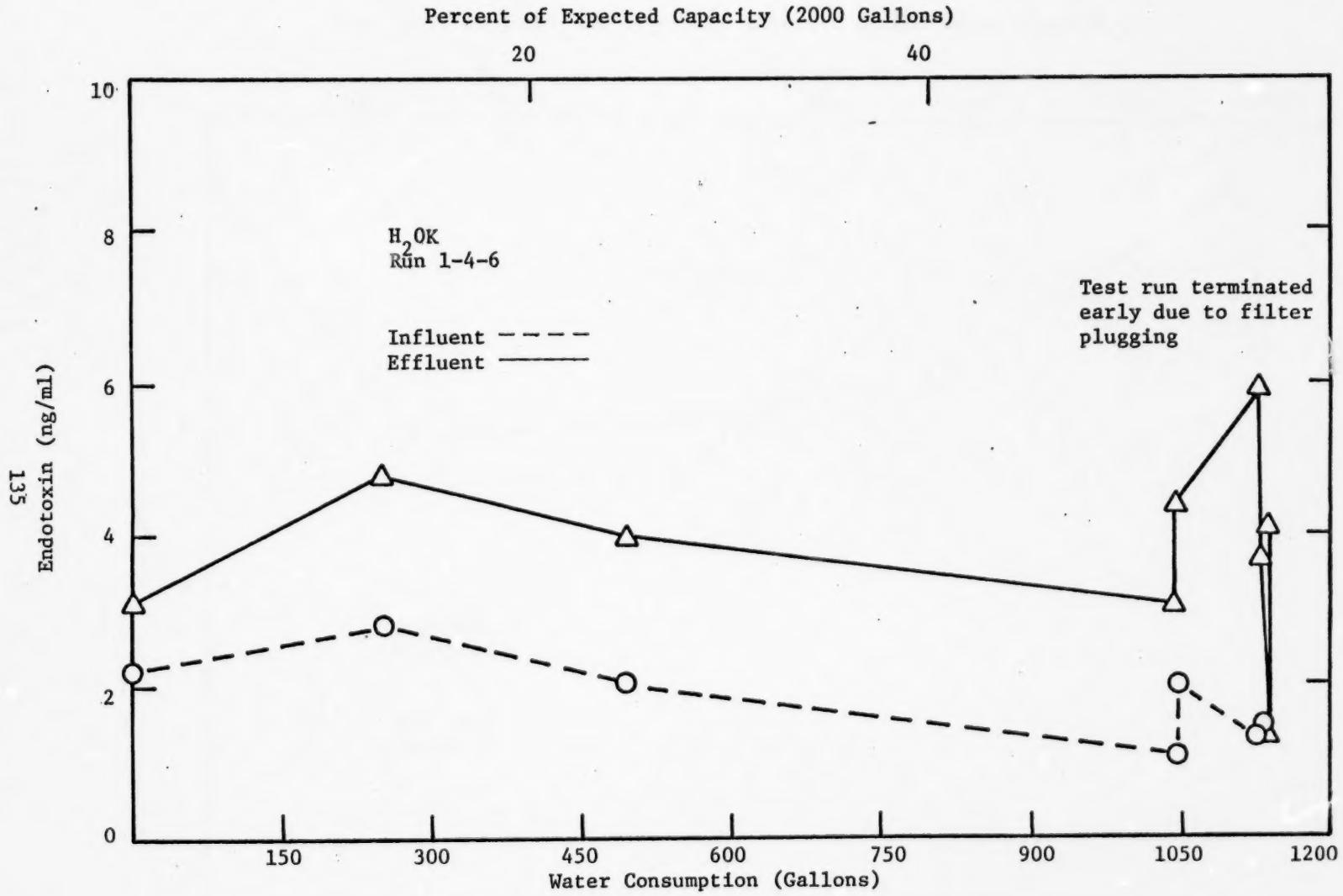

Figure S70. Influent and effluent endotoxin versus water consumption.

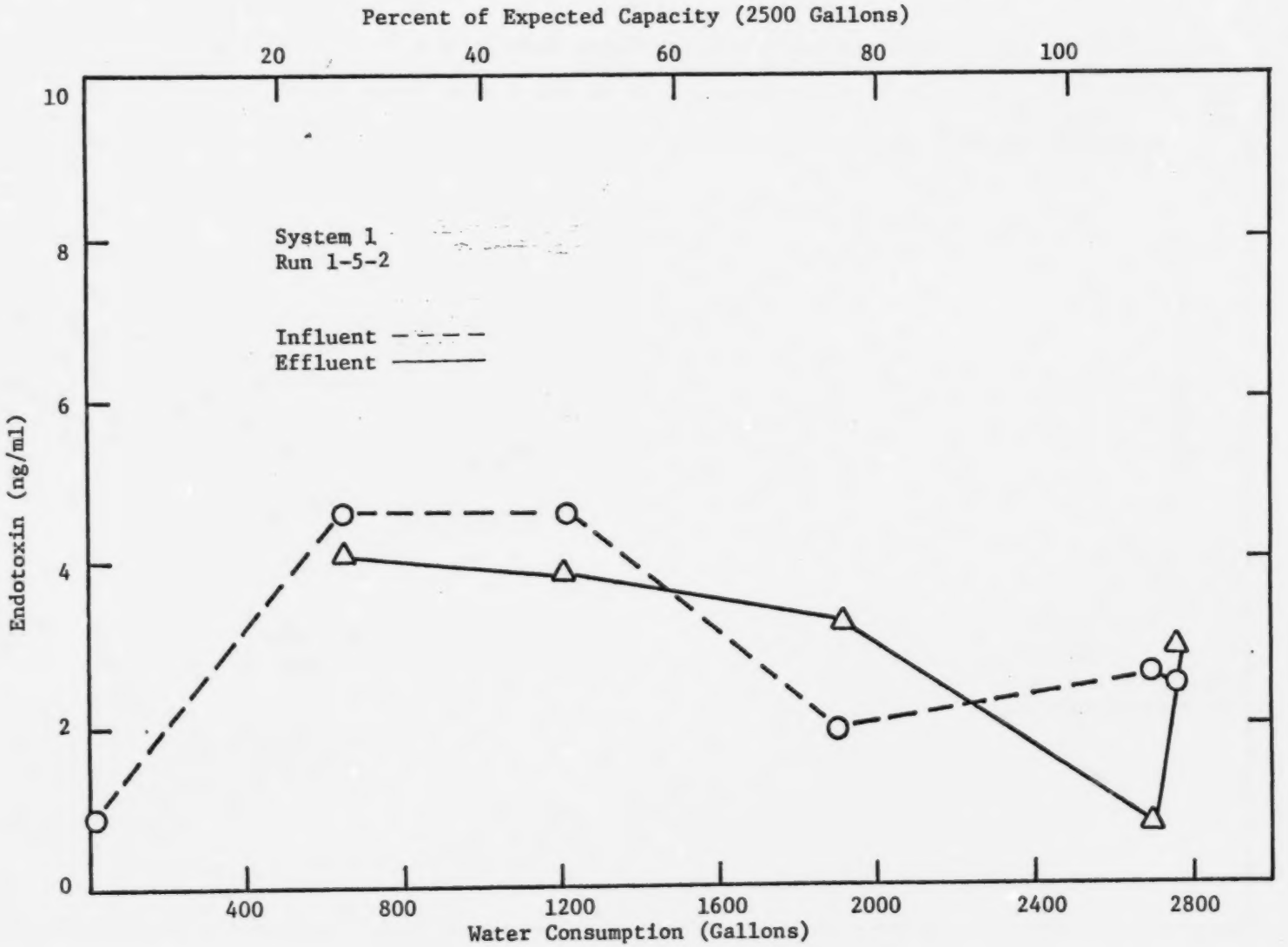

Figure S71. Influent and effluent endotoxin versus water consumption.

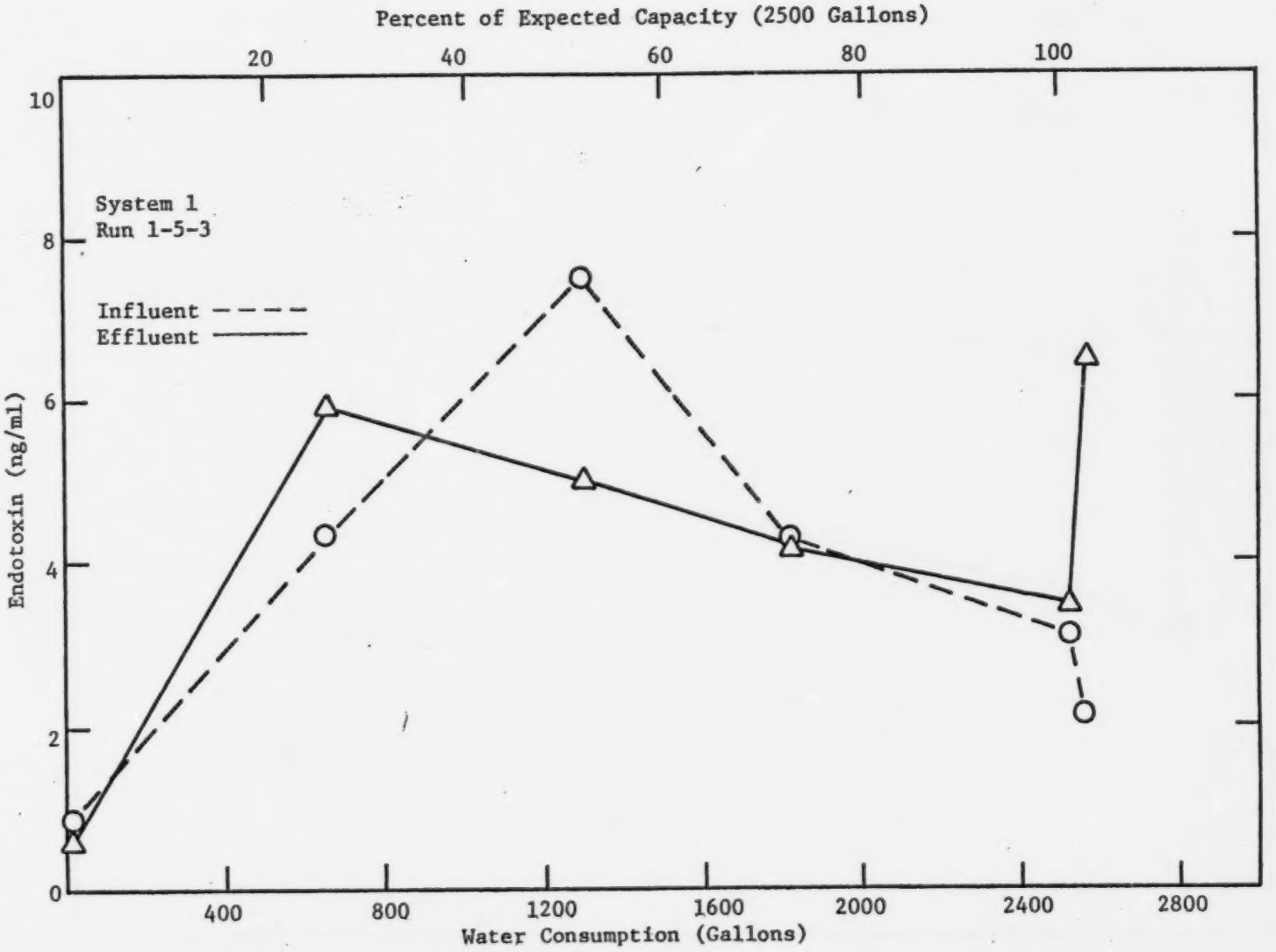

Figure S72. Influent and effluent endotoxin versus water consumption.

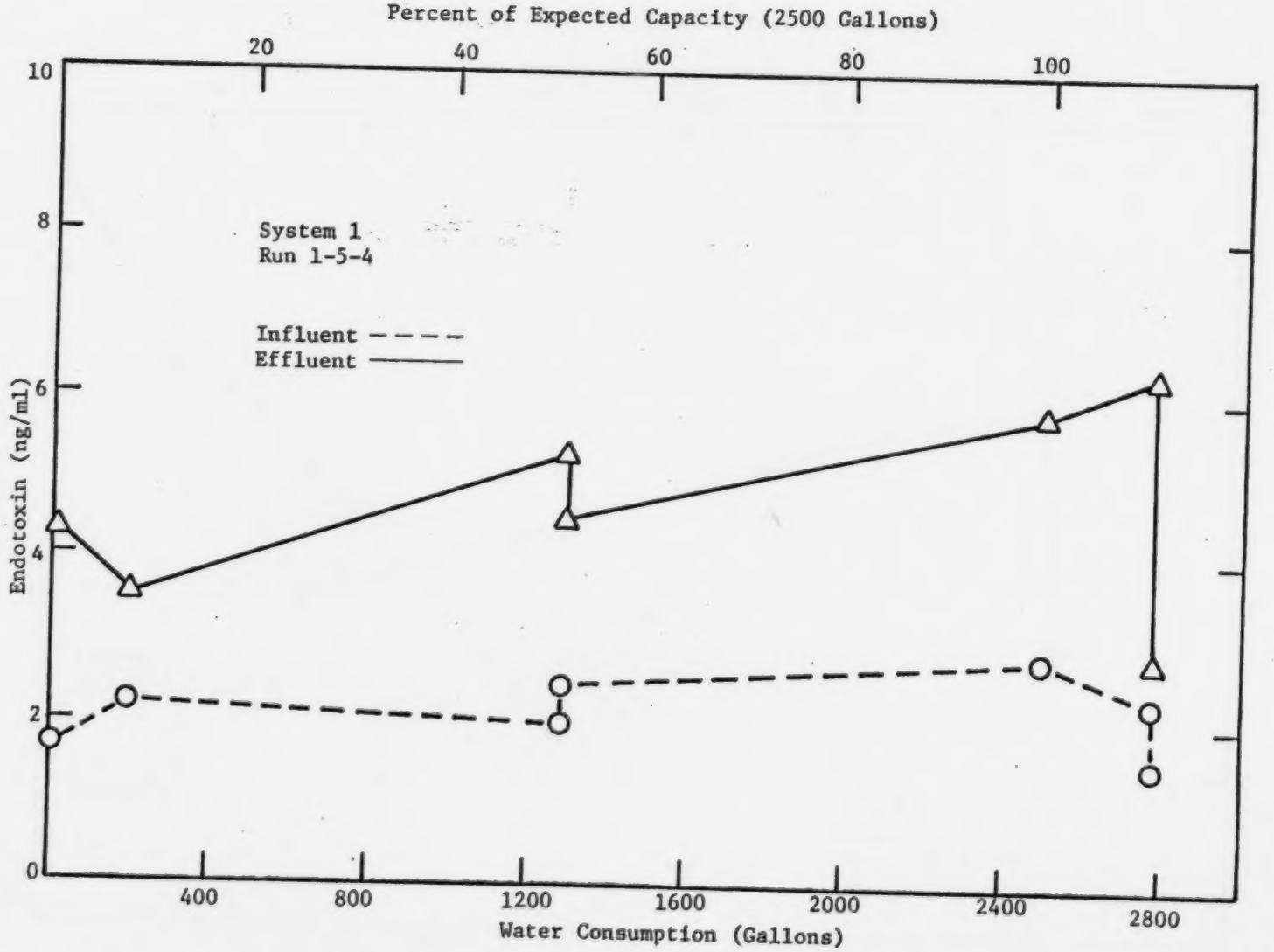

Figure S73. Influent and effluent endotoxin versus water consumption.

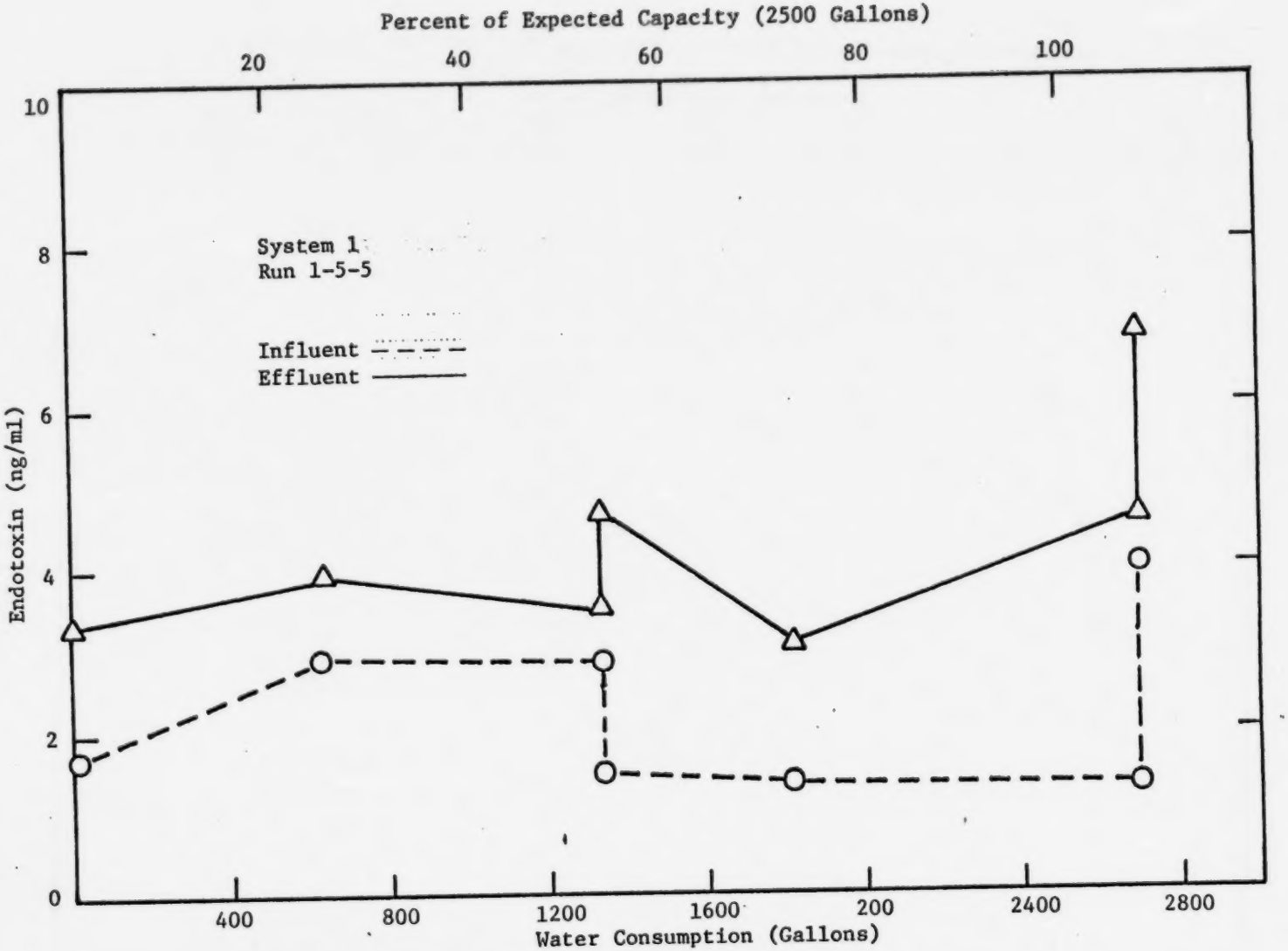

Figure S74. Influent and effluent endotoxin versus water consumption.

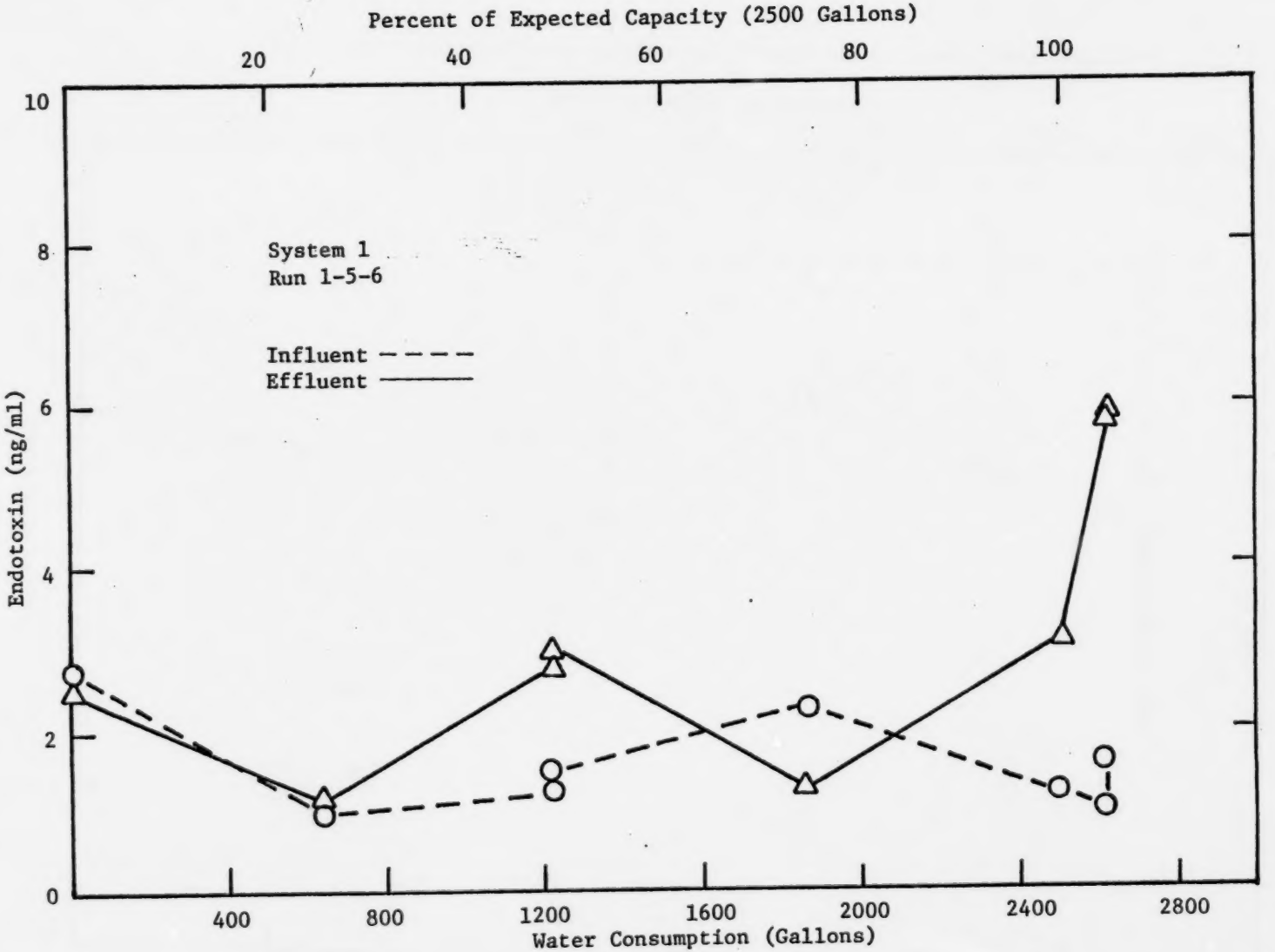

Figure S75. Influent and effluent endotoxin versus water consumption.

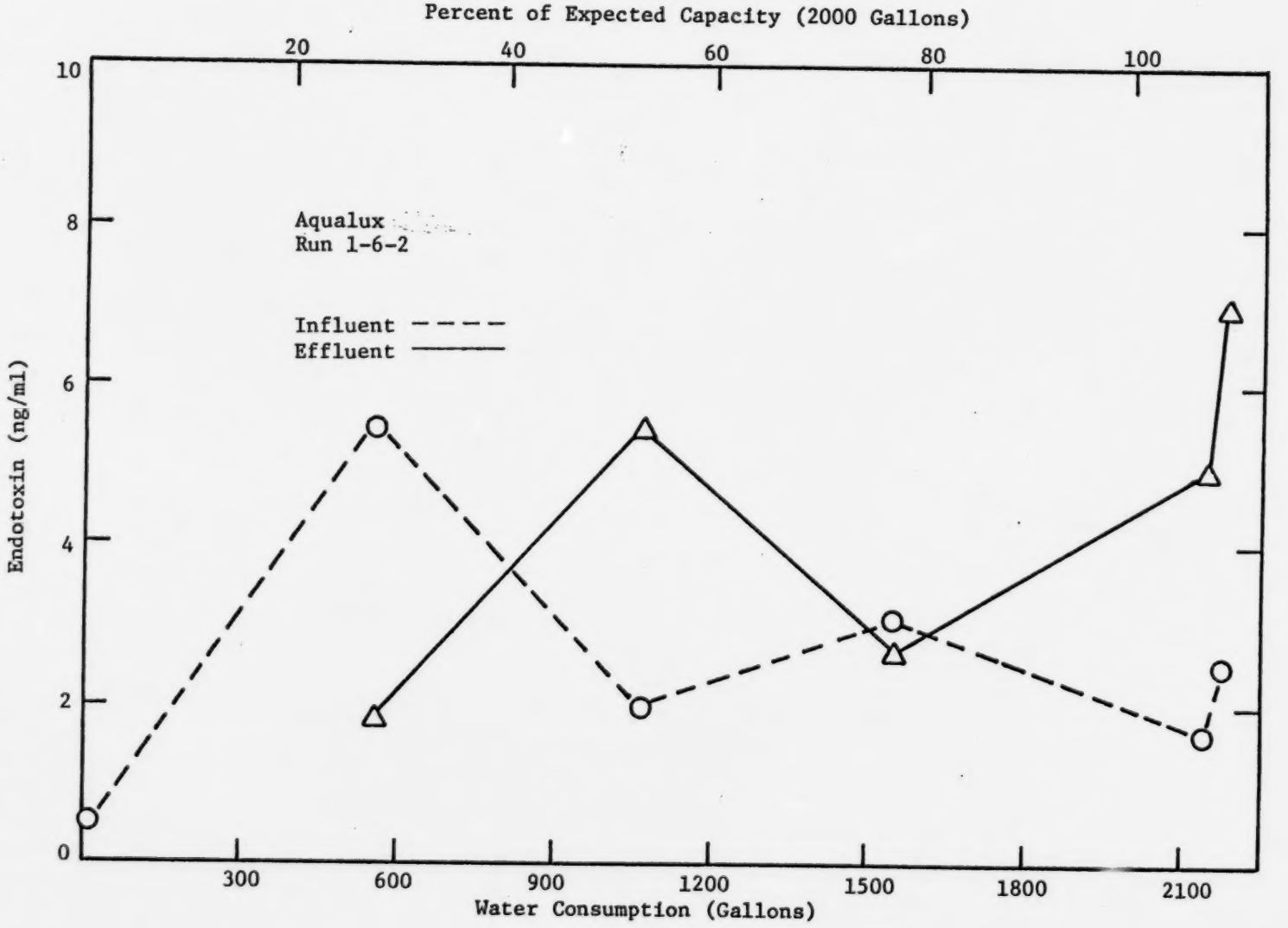

Figure S76. Influent and effluent endotoxin concentration versus water consumption.

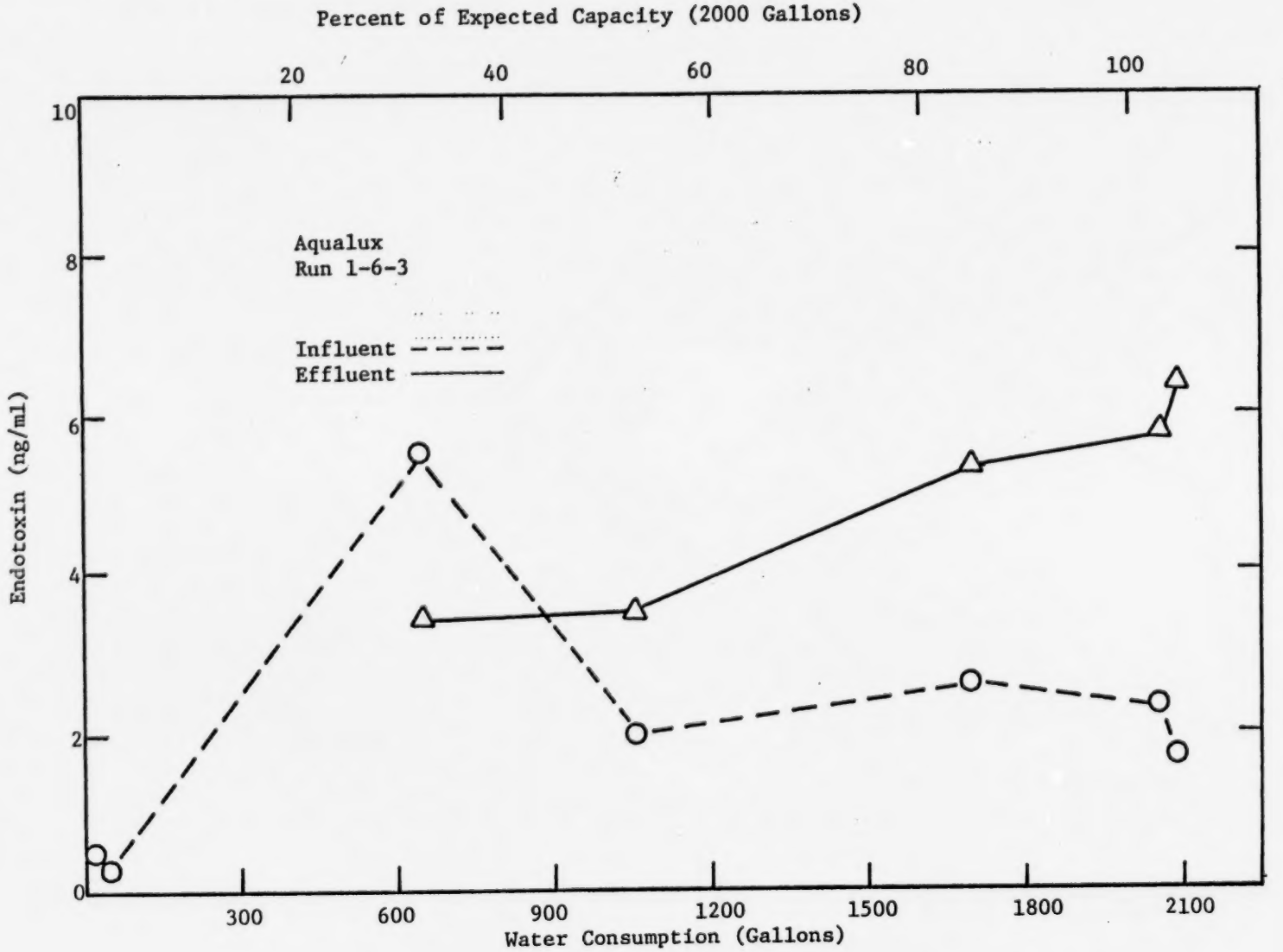

Figure S77. Influent and effluent endotoxin concentration versus water consumption.

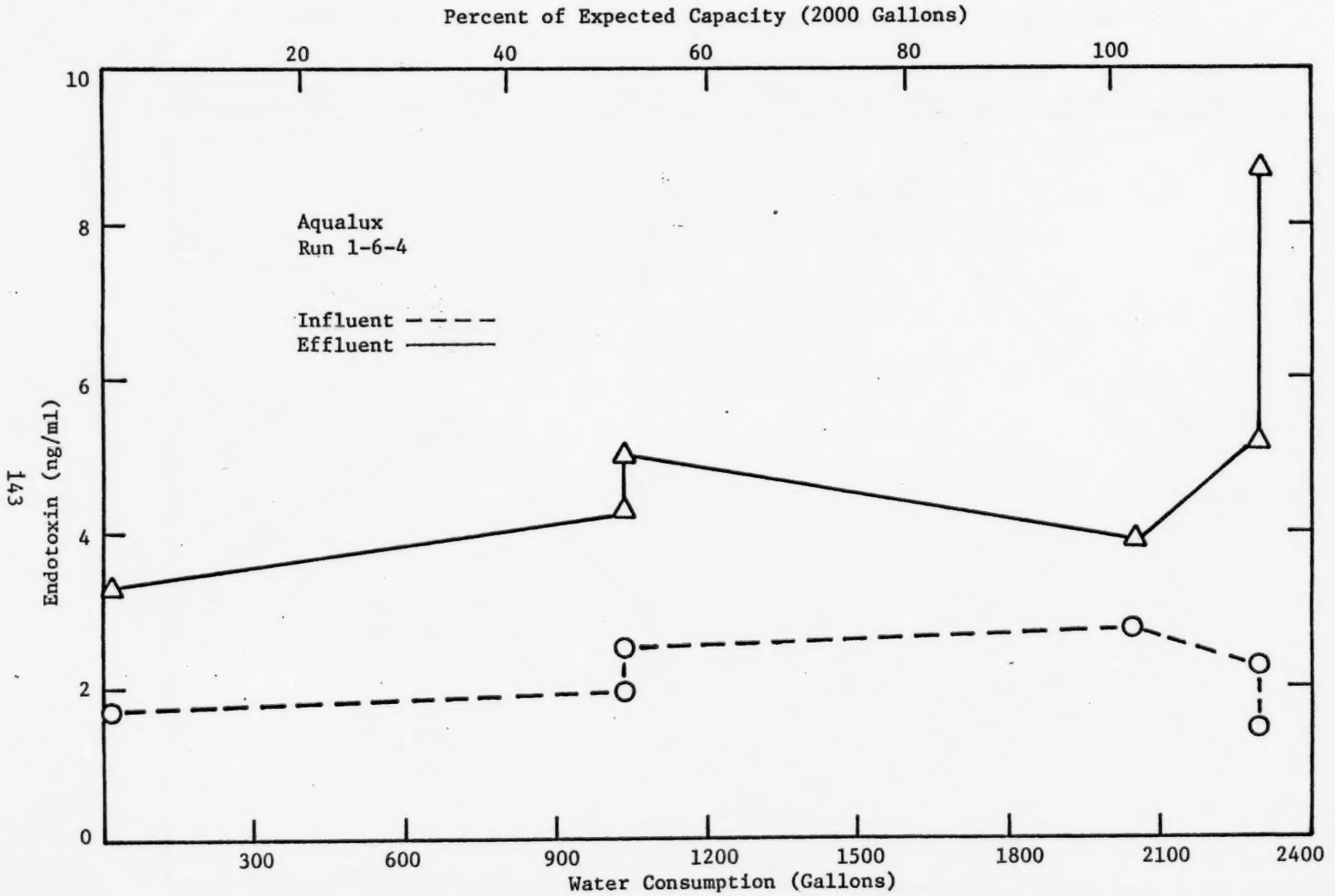

Figure S78. Influent and effluent endotoxin versus water consumption.

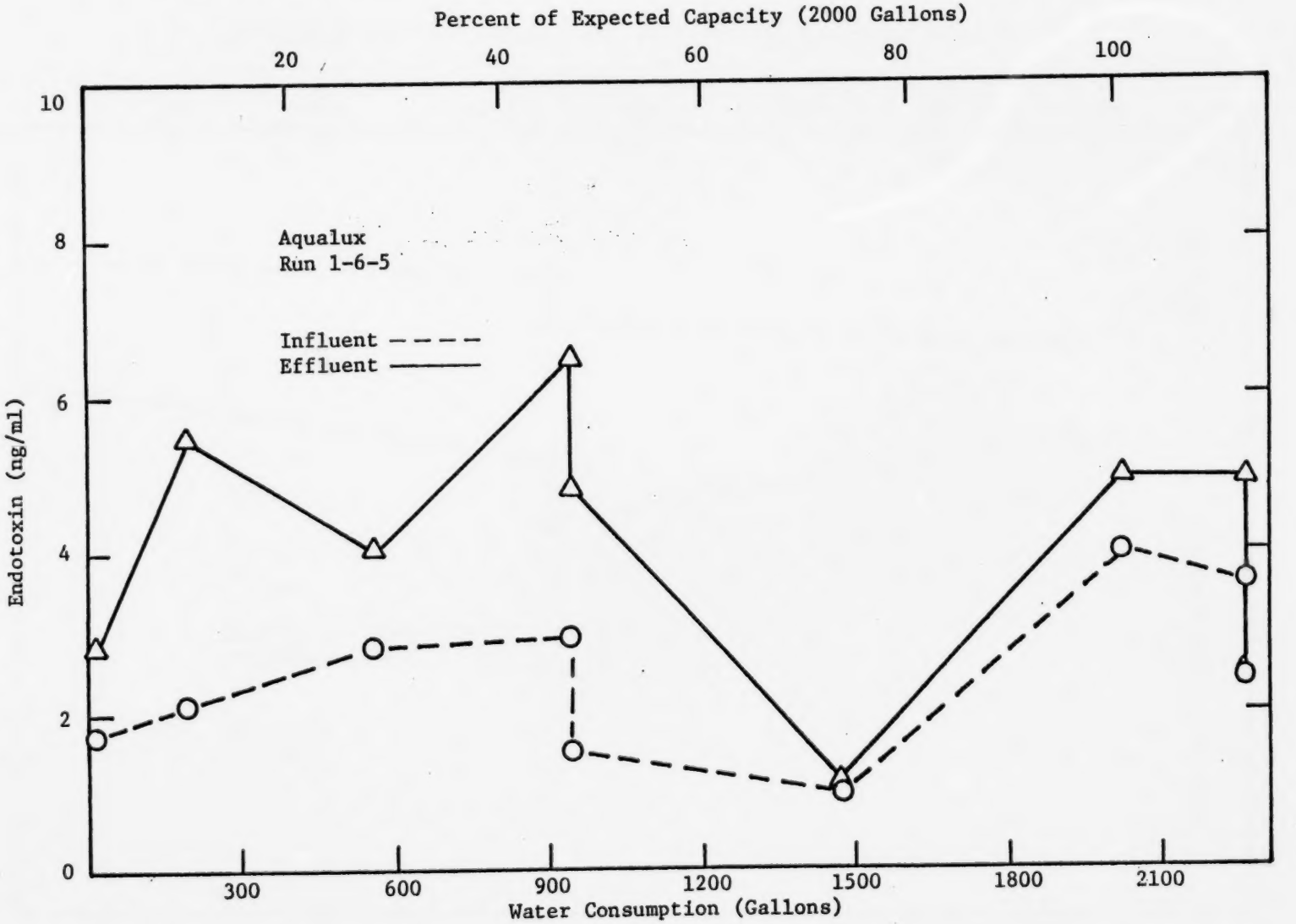

Figure S79. Influent and effluent endotoxin versus water consumption.

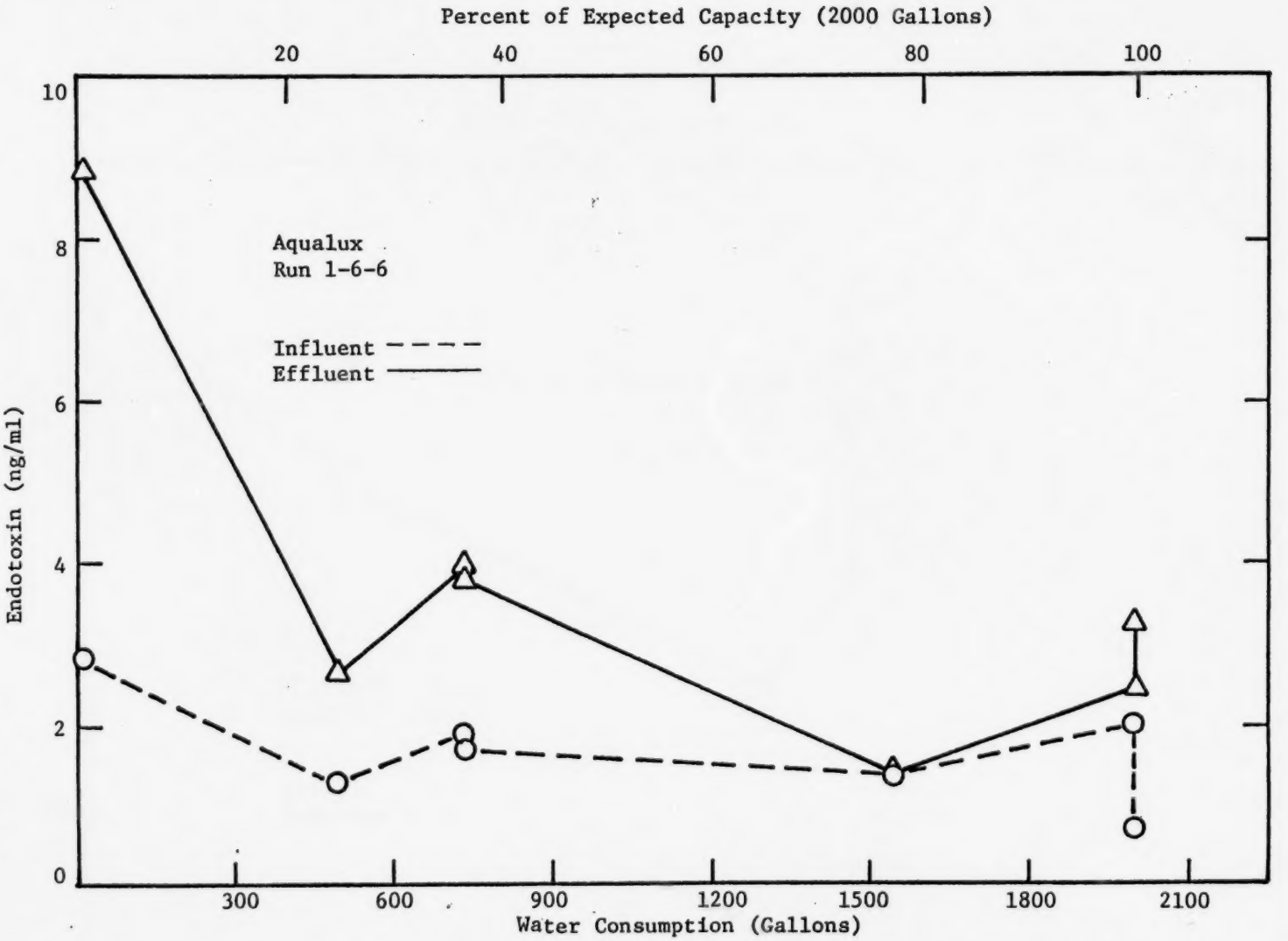

Figure S80. Influent and effluent endotoxin versus water consumption.

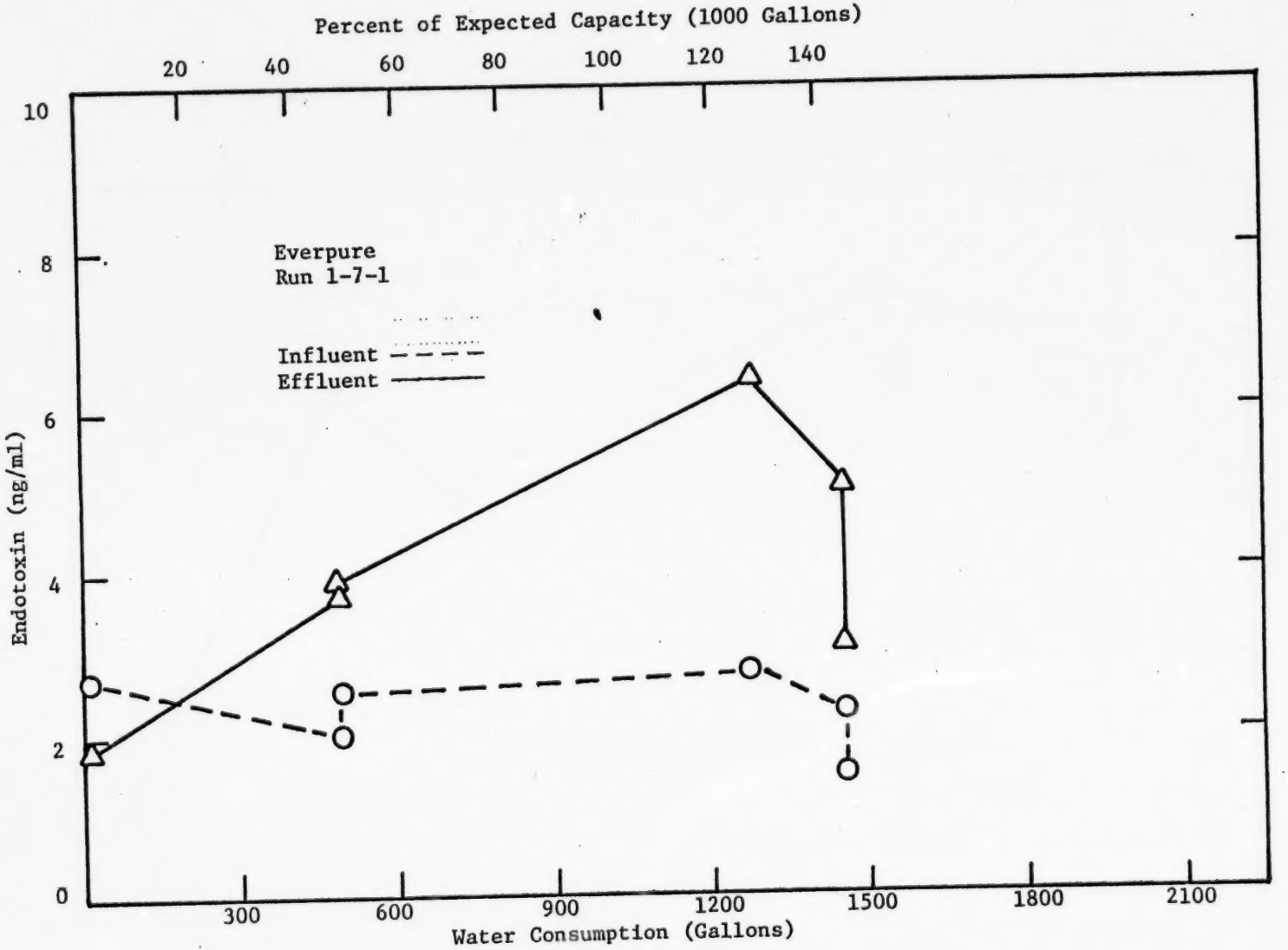

Figure S81. Influent and effluent endotoxin versus water consumption.

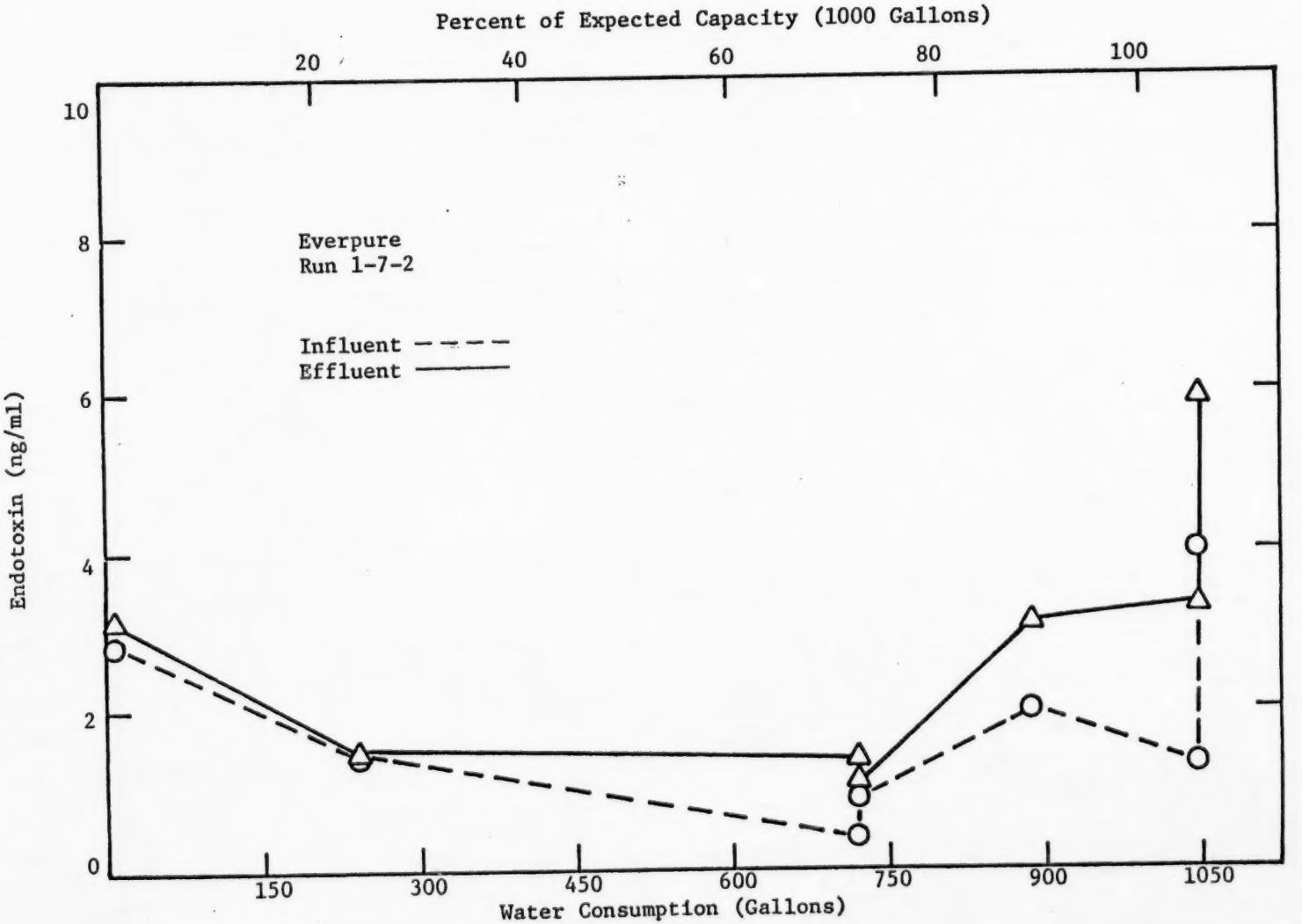

Figure S82. Influent and effluent endotoxin versus water consumption.

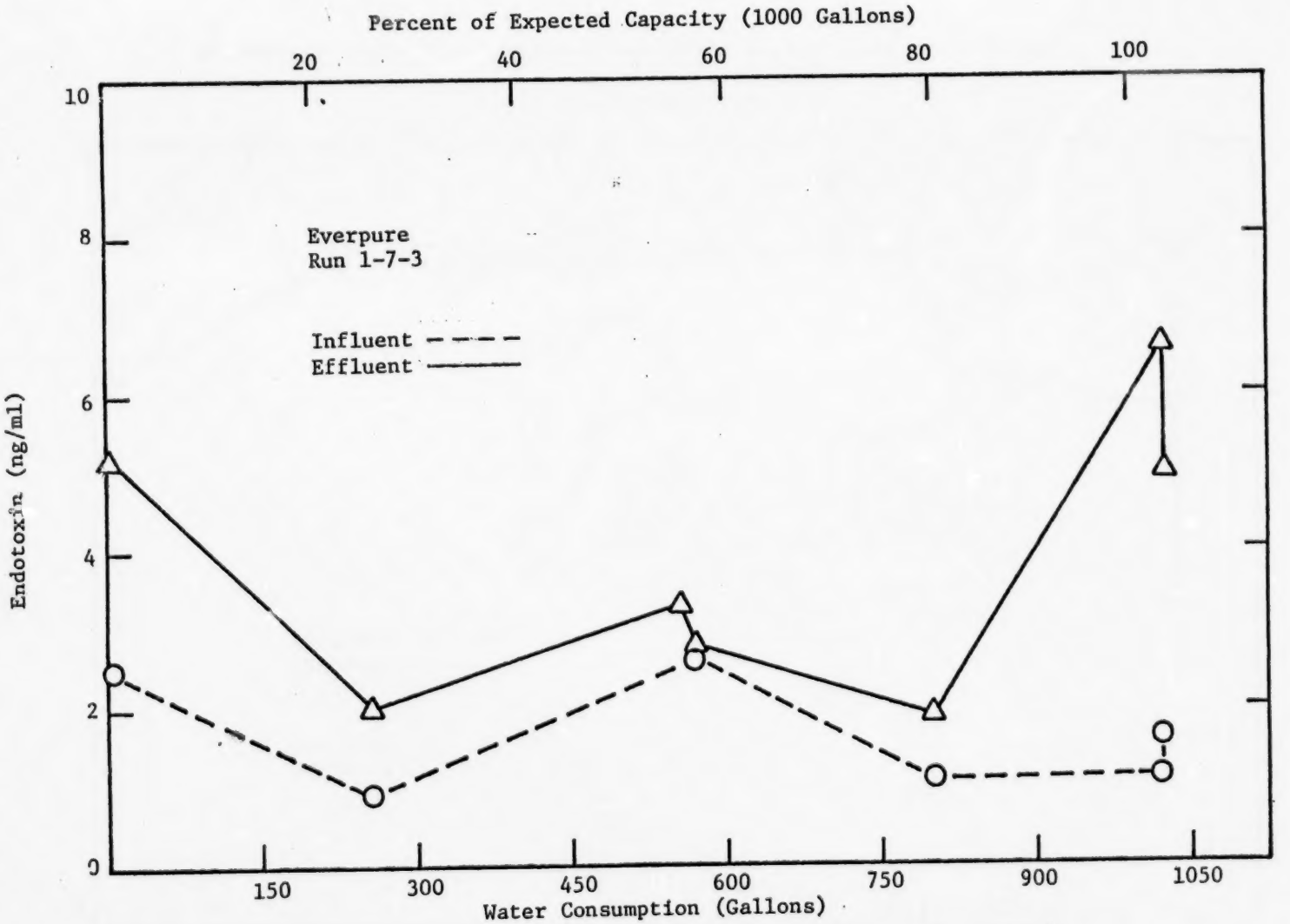

Figure S83. Influent and effluent endotoxin versus water consumption.